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DEVOTED TO

Practical and Progressive Agriculture, Horticulture,
Trucking, Live Stock and the Fireside.

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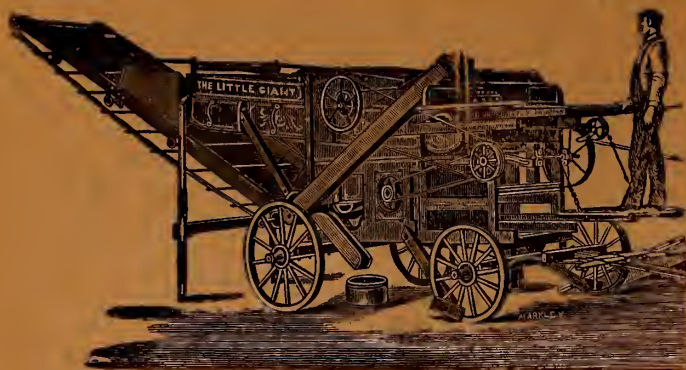
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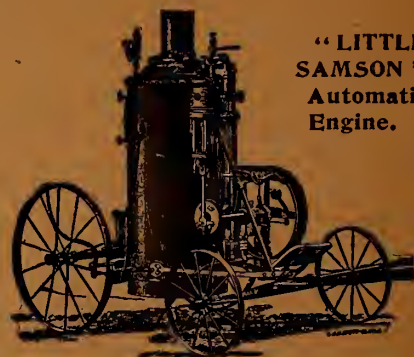
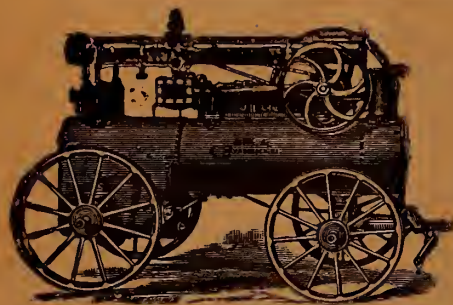
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Agriculture is the nursing mother of the Arts.--XENOPHON.
Tillage and pasturage are the two breasts of the State.--SULLY.

64th Year.

Richmond, November, 1903.

No. 11.

Farm Management.

WORK FOR THE MONTH.

The month of October has been up to this writing (20th) an ideal fall month and has done much to repair the effects of the abnormal season through which we have passed. Thousands probably millions of bushels of corn have been added to the crops of the year by the weather of October and whilst much of this will be defective from being either only partially matured, or from the effects of frost, yet it will make a very sensible addition to the feed bins of the country. Much spring wheat, too, has been saved in far better condition than appeared at one time to be possible. Cotton has been enabled to make a decided improvement in condition, yield and quality, and the crop which at one time looked like being an abnormally small one for the acreage will probably be equal in quantity to that of last year. Late tobacco has ripened up nicely and is curing well. Second and even third crops of hay and forage crops of various kinds have matured and been saved in fine condition and pastures have kept full of good eating and stock will go into winter quarters in fine condition and with the assurance of plenty of feed for the winter months. For these and many other benefits conferred by the glorious month, we have had to close the crop season, farmers and all the people should on Thanksgiving Day not fail to give thanks to the "Giver of all things."

The work of preparing the land for the wheat crop could not have been carried on under better conditions than October has provided. The land has been in fine working order and the

weather has been such as to allow of the very best progress being made. Whilst it has been too warm to sow wheat without fear of injury from fly, yet the fine preparation of the land which has been possible will ensure such quick germination of the seed when sown as to make possible an ample growth before the cold becomes severe enough to check it. We would urge again the importance of perfect preparation of the seed bed before sowing. Better be a week later in sowing even at this time of the year than sow on badly prepared land. The late Sir J. B. Lawes in his more than 50 years experiments in wheat growing demonstrated how capable is the wheat plant of seeking and finding food sufficient for its growth even in land which presumably is lacking in fertility. He grew wheat on one piece of land every year continuously for over 50 years without the application of any manure or fertilizer for the whole time, and yet succeeded in getting each year a fair crop, 12 bushels to the acre, in the last year of the 50. He attributed his success entirely to the fact that each year he made a perfect preparation of the land before seeding, plowing deeply and working and reworking until the seed bed was deep, fine and properly consolidated below the top three inches. This point is also strongly brought out in the work done in carrying on the experiments in soil fertility by the Department of Agriculture discussed in the Bulletin from the Bureau of Soils upon which we comment in another article in this issue. The Cecil clay soils in Harford county, Md., under good cultivation and management give yields of 25 to 30 bushels of wheat to the acre, whilst the same Cecil clay soils in the

Statesville area in North Carolina which have practically the same analytical content of plant food, only produce from 5 to 8 bushels to the acre under the ordinary system of management common in North Carolina, but with thorough cultivation and management bring yields almost equal to the same soils in Maryland. This is only one of many similar instances to be found in the Bulletin. The average wheat crop of the South this year, only some 8 bushels to the acre and over a series of years not exceeding the 12 bushels secured by Sir J. B. Lawes after growing wheat 50 years without manure or fertilizer, is one of which the South has no cause to be proud. It could easily be doubled without the expenditure of a dollar an acre more for fertilizer by a proper system of rotation and perfect preparation of the soil before seeding. There is no profit in growing 12 bushels of wheat to the acre, but money can be made in raising 25. Let each one make an effort to reach this quantity by curtailing the area and making a perfect preparation of this smaller area. Harrow and roll, harrow and roll until there are no clods left but only a compact, fine sub-surface and a fine surface 3 inches. Sow only perfectly clean seed and let this be only the largest and plumpest wheat you can obtain. Blow out all small and shrivelled grains. Put in the seed to the depth of $1\frac{1}{2}$ or 2 inches on heavy soil and rather deeper on light sandy soil. Sow from 1 to $1\frac{1}{2}$ bushels to the acre according to the fertility of the land, the lighter seeding on the richer land. In selecting the variety to sow choose one of the early maturing ones, like Fultz or Fulcaster, in order as far as possible to avoid loss from damage by rust, which rarely attacks the crop until about the first or second week in June by which time the earlier varieties will have matured. We would like to see every farmer in the South make at least a small wheat crop. We ought at the worst to make our own bread at home and there is no reason why we should not do more than this. At present we do not feed ourselves. This year's crop is not going to be larger than will be required to meet our own and foreign demands and there need not therefore be any fear of a large surplus carried over for another year.

The saving and storing of the corn and forage crops should receive constant attention whenever the weather permits until all are safely stored in the barn or in stacks near the buildings. It is lamentable to see the carelessness which is common all over the South in this matter. Time, money and labor is expended in growing the crop and then too often a great part of it is lost by neglect in cutting, curing and

hauling it home. Especially is this the case with the corn crop. When once it is cut and set up in shocks all further thought of it seems to be abandoned until necessity calls for the produce and this is often not until winter has actually set in and then the hands will be seen pulling down the shocks and shaking the snow off them and carrying them in, one or two at a time, just as need calls for them. At that time much of the food value has been lost and much of it is absolutely wasted. There is no excuse for such an unbusinesslike way of handling the crop in the South. Our long, usually fine falls, give ample opportunity for the housing of the crop before winter sets in and this should be done as soon as ever the crop is ready for the house. The cutters, shredders and huskers make it possible to reduce the stalks into such a form that the fodder from a large area can be stored in small compass and when saved in this form it is practically as good as Timothy hay for feed. These machines are now being operated in many sections by the threshing machine men who travel from farm to farm and wherever a machine is not owned on the farm these should be secured to save the crop. Especially should their usefulness be appreciated at the present time when labor is scarce and dear. If no machine is to be had then at least carry the fodder home as the corn is shucked and either put it under cover if room can be found for it, or put up in stacks and cover with straw to protect it. It is too valuable to waste in the field. Not only is this wastefulness seen in regard to the corn crop but we often see clover and other forage crops left in the field in cocks for weeks after they are fully cured. In such cases a large portion of the crop is but of little value except for bedding. Such a practice is a strong reflection upon the business capacity of the farmer and causes unbounded astonishment to Northern and European farmers where every care is taken to save all that the labor of the season has produced. Farming will never pay conducted under such management. No business man in commercial life could succeed with such management. Very often the sole profit made in commercial undertakings is that made from the saving of the waste products of the principal business. It is said, and we believe with truth, that the great packing houses of the West could make no profit but for the careful utilization of the offal and waste of the cattle and hogs slaughtered.

All root crops should be dug or pulled during this month though ruta бага turnips need not and should not be pulled until the end of the month. A light

frost will not hurt them and they will gain more weight during this month than during any other like period of their growth. Beets and Mangold wurtzel beets should not be left to be frozen as they never keep well after frost has touched them. All root crops can be safely cared for during the winter, either in a dry cellar or shed, keeping them well covered with straw, or they may be put in heaps or kilns in the field on high dry ground where the water will drain from them. These heaps should be covered first with straw to the depth of 6 inches and then with soil which should be beaten solid to throw off the rain. See that the roots are dry and clean of soil when stored and that the leaves or tops are cut off cleanly but without cutting into the roots themselves. The leaves should be left on the ground to be turned under to add humus to the soil. Young cattle and sheep may be allowed to pick them over before turning under but milch cows should not be allowed to eat them as they are very apt to taint the milk and butter.

When all crops are safely housed keep the teams at work breaking the land intended to be cropped next year. Up to the end of this month land so broken may be and should be seeded in rye or rye and English vetch. This will make a cover crop to prevent leaching of the fertility out of the soil during the winter and spring and will make grazing and humus when plowed down, or an early forage crop. Do not hesitate, however, to plow all land intended to be cropped next year whether it can be seeded or not and plow it deeply thus enabling it to hold and store moisture for the needs of the coming crop and permit of the aeration of the soil and the reduction of inert plant food into an available condition. Recent investigation has shown that all soils contain nearly the same amount of the three principal elements of plant food dissolvable by water, and that one of the greatest factors in plant production is the reduction of the soil by plowing and cultivation into such a fine condition as will permit of the action of the water content of the soil upon each particle of the soil, so that this natural plant food can be put into solution ready for the needs of the crop which only feeds upon liquid food. The greater the amount of this plant food thus dissolved and held in solution the greater will be the yield of the crop. This dissolving of the natural plant food of the soil is a work requiring time and hence the importance of breaking the land in the fall and winter months. We are convinced from long practical experience and as the result of recent scientific investigation that the main

factors in successful crop production are not so much the application of fertilizers of any kind as the securing in the soil of a high moisture content and of soil microbic life. These microbes are silent workers in the interest of the farm and without their presence no high condition of fertility is possible. Everything possible should be done to encourage their presence and a finely broken condition of the soil is one of the first things required. This is the proper time to set about securing this finely broken condition before the soil has become unfit for plowing with the winter rains, and this breaking should be followed wherever possible by the addition of lime to the soil to correct any acidity and thus secure that alkaline condition of the soil which is necessary to the life of the microbes, and then, by the spreading of even a light covering of farm yard manure which is the principal medium through which the microbes are introduced into the soil. In a recent examination of the soil of a noted small farm in Pennsylvania where 20 cows are kept on 15 acres of land and where the manure from this stock is constantly applied to the land each foot of the soil was found to contain several million more of these microbes than the soil of an adjoining farm where little manure was applied and the soil was badly worked. The soil of the small farm was producing all the forage crops needed to feed this large herd of stock, making two and three crops per acre each year, whilst on the adjoining farm it was difficult to make even one paying crop per year. Another great advantage in fall and winter plowing is that it relieves the spring pressure of work and can be done with so much less injury to the team than in the spring. It also causes a quicker warming of the soil in spring and thus permits of earlier planting. Don't let the horses or mules stand in the stable in fine weather eating their heads off, but keep them at work in the fields. Even if land plowed now should require plowing again in the spring this will not hurt it but will only add to its productivity. *We in the South plow too many acres but never plow acres too frequently.* Plow and cultivate fewer acres but plow and cultivate them much more frequently, and thus make available the natural fertility in the soil and save money now spent in fertilizer which at best only give temporary fertility to the soil.

Have you seen to it that all your barns, stables, sheds and pens have been put into a good state of repair, roofs made water proof, windows reglazed, and walls cleaned and limewashed? If not no time should be lost in having this work done. Whilst

stock will do very well out in the pastures during the day for some time yet, the nights are getting too cold for them to be comfortable and if not comfortable they cannot make a profitable use of the feed they are eating. To bring them up and put them in stables through which the wind whistles and into which the rain leaks will not make them any more comfortable or profitable. If you have not already a good tight concrete floor in your stables and cowsheds have this remedied at once. You are losing money every day your cattle stand on a floor that does not prevent loss of the urine. A barrel of cement which will not cost over \$2 or \$2.50 will with some finely broken rock and sand, make a floor which will save this loss. You can do the work of mixing and laying yourself. The proportions should be 9 parts rock, 2 parts sand and 1 part cement for the body of the floor. Mix the sand and cement dry, then add to the rock and make into a mortar with sufficient water and lay it 4 inches thick and beat solid. After this is laid cover the surface half an inch thick with another layer made of two parts of clean sand and one part of cement mixed with water thin enough to spread evenly. Keep stock off the floor for a week or ten days when it will be firmly set. Use plenty of straw or other trash to absorb the urine held by this floor and you will have manure worth putting on your land. A good manure pit should also be made convenient to all the stables and barns so that when it is not fit to take out the manure directly from the stables to the land which is always the best and most economical way in which to handle manure, it may be stored without serious loss. This pit should have a good hard clay bottom and should slope from the sides towards the centre so that the liquid may not run away. If covered with a shed money will be saved by protecting the manure from the weather. Don't make the pit where the drainage from the roofs of the buildings will run into it. The rain which naturally falls on the manure will be all the water it needs. If the manure from the different kinds of stock be all mixed in this pit it will not overheat, but if the horse manure be put in one place alone it will do so and much of its value be lost.

See that the barn yard has a good fence around it so that when stock are turned out to drink or for exercise they may not be able to ramble all over the farm. Stock tramping on wet land do much injury to the crops. Have a gate or gates hung in the fence with proper means for fastening and make it a rule to keep them closed except when needed for passage. It is well to hang the gate so that it will close itself.

Have good dry pathways made from the house to the different buildings. These should be elevated above the general level of the land so that they will keep dry at all times. There are few farms where sufficient small rocks and gravel cannot be found to make these permanent improvements to the place and when once they have been made the comfort derived from them in being able to go about from building to building in wet weather without wading through mud and water will be so appreciated that they will never be dispensed with. Around the house and to the wood shed it will be well to make the walks of 3 inch slats nailed on two 2x4 inch bearers laid 2 feet 6 inches apart. This will ensure dry, clean walks at all times and prevent much dirt being carried into the house.

See that there is a good supply of dry seasoned wood in the wood house and at the wood pile. Do not subject the women of the house to the annoyance of having to cook meals and keep the house warm with wet green wood.

PLANT FOOD AND CROP PRODUCTION.

For more years than we can recall agricultural writers, scientific authorities and practical farmers have been engaged in discussion of the problems affecting crop production and the discussion still proceeds even more vigorously than ever before. With the spread of scientific education and the realisation that if farming is to be made profitable it must be conducted on scientific principles thousands who were formerly content to follow in the footsteps of their fathers find it absolutely necessary to give heed to the teachings of the expert scientists as to how and with what to feed their crops and fertilize their lands. The difficulty they experience in doing this is to know what teaching to follow. In the early days when farmers first began to realize that their lands in the old country needed help they were advised by Jethro Tull that "cultivation was the fertilizer they needed." Many accepted the advice and profited by it. Then investigation by scientific chemists having demonstrated that the food plants needed was nitrogen, phosphoric acid and potash in an available form Peruvian Guano to supply the nitrogen the German potash salts to supply the potash and super phosphate to supply the phosphoric acid were put within the reach of farmers and were found to give good results. Experience in the use of these fertilizers has, however, demonstrated the truth that to secure continued good results their use must when

once applied be continued and even then their action is very uncertain. One year they give excellent returns, whilst in another year and on the same crop no results can be seen. On one piece of land they will tell immediately whilst upon another their action will be inappreciable. These results led to the conclusion that what was needed was a chemical analysis of the soil in order to determine what were the plant food constituents lacking therein in order that these might be supplied. Experience, however, with this laboratory analysis of soils has not given such results as to warrant confidence in its use. Too often the chemist by means of his powerful acid solvents has found the soil to be well supplied with all the plant food needed, but the crop failed to make these available when only the natural solvents of the atmosphere were available. A careful consideration of all the work done in the past in advising and aiding farmers in the work of crop production and the practical application of these has led to the conclusion that other factors were at work determining the crop productive capacity of land than those hitherto deemed conclusive and with a view to endeavour to find out what these were a great series of experiments has been conducted by the Bureau of Soils of the Department of Agriculture under the direction of Profs. Whitney and Cameron. The result of these so far as they have proceeded has been given to the world in a Bulletin just issued by the Department of Agriculture. This Bulletin we regard as one of the most valuable ever published. After giving the results of the chemical examination of the natural moisture content, the true plant feeding constituent of all crops, of hundreds of samples of soil taken from typical soils in various parts of this country and abroad, the authors of the Bulletin say that the analyses show "that there are no wide variations in the amounts of plant food material going into solution where these various soils, so different in their other characteristics, are acted on by a definite proportion of water for a short but definite length of time, in other words all types of soils furnish about the same amount of plant food when treated with the same proportion of water other conditions as time, temperature, &c., being also the same. *The conclusion seems inevitable that all our principal soil types in fact all cultivable soils contain naturally a nutrient solution which varies within comparatively narrow limits with regard either to composition or concentration and which is usually sufficient for plant growth. Apparently, therefore, all these soils are amply supplied with the necessary*

mineral plant foods and these plant foods are not in themselves a matter of such paramount importance to the agriculturist, for their supply as regards the plant is determined by the supply of soil moisture which the crop can obtain from the soil. The chemical analysis of a soil can not in itself, therefore, throw much light upon the problem of fertility but when attempting to control the factors governing crop yield attention must be directed to the mechanical condition of the soil as affecting the supply of soil moisture with its dissolved mineral nutrients, to the effects of climate, to rotation, &c." In discussing the effect of climate on the yield of the crop—climate in this connection being understood as to its effect on the soil and temperature—the authors of the Bulletin say that "the effect of climate is very marked, that cultivation changes the climatic conditions of the soil, that is it changes the relation of the soil to moisture and probably also to temperature. It also changes the character of the atmosphere coming in contact with the root system. We know that stable manure and lime for example have a marked influence upon the texture of the soil and therefore indirectly upon the climatic conditions. It seems possible that other fertilizer materials may produce effects of a similar character. If fertilizers have any influence upon the texture of the soil or upon the movement of soil moisture they will not only influence the supply of water which will be delivered to the plant but also the supply of nutrient materials normally contained in this water. The important practical inference, if this is so, is that fertilizers have to a certain extent the same effect as cultivation and cropping, *but it is undoubtedly better to depend upon efficient methods of cultivation and cropping than to rely upon fertilizers while at the same time neglecting to give proper attention to the physical condition of the soil. The effect due to cultivation is also more permanent than the effect due to fertilizers.* Furthermore the influence of fertilizers on the yield of crops is not proportional to the amount of fertilizer added as it frequently happens that a small application is quite as efficient as a larger application. Discussing the effects of commercial fertilizers on the yield of crops the authors remark that where the annual application of the fertilizer has been discontinued the effect is at once apparent in the smaller yield of crops. In other words on a soil which has a natural capacity for 13 or 15 bushels of wheat as the Rothampstead soils in England seem to have where wheat is grown continuously and fertilizers have not been used for 50 years, the application

of certain fertilizers has increased the yield to 30 bushels to the acre, but to maintain that yield a constant annual application of fertilizer has to be given and subsequent applications merely maintain but do not increase the yield. It is recognized that in our own soils when under intensive cultivation as in the truck and tobacco areas large applications of manure and fertilizers are often used amounting to from 2 to 5 carloads of manure and 2,000 or 3,000 pounds per acre of the fertilizers the maximum effect of these is quickly obtained and these yields can only be maintained by continued large applications. The results obtained in the experiment by the Bureau of Soils go to show that these large annual applications of stable manure or of high grade fertilizers do not apparently change permanently the chemical composition of the soil as determined by chemical analysis of the water extracts, that is to say, immediately after the application the influence of the fertilizer can be seen in the soluble salt content of the soil but not only is this comparatively slight, but fields that have been annually treated in this way for a number of years do not show on the average appreciably more water soluble plant food than adjoining soils upon which no such applications have ever been made." The Bulletin discusses the influence of the texture of the soil of rotation, and variety of the plant, on the yield of crops and also the action and use of commercial fertilizers and their influence on the fertility of the soil. These subjects we will take up in a subsequent article together with the conclusions to be drawn from the experiments. The point we will now emphasize is that the position we have taken up and enforced in our writing for years, that the *physical and mechanical condition of a soil* is of more influence and importance in the yield of the crop than the application of any fertilizer, is more than sustained by the evidence accumulated in the Bulletin.

FARMING IN SOUTH-SIDE VIRGINIA,

For years the greater part of the lands of the Central plain of Virginia south of the James river have been regarded as probably the poorest in the State, and as a consequence have been largely abandoned and allowed to grow up in broomsedge and pines, thus giving strong countenance to the prevailing opinion, and condemning these lands in the eyes of would-be settlers and buyers. That this opinion is not justified by the facts we propose to prove by showing what one intelligent, reading, systematic and practical farmer has succeeded in doing upon a farm

in the centre of the condemned section and which farm when he took it in hand some ten years ago was regarded as being probably one of the very poorest in the whole "South-side," so poor indeed that it was freely said he would lose all he had on it and die of starvation. Intelligent management, persevering industry, and the introduction of live stock and a diversified system of agriculture, has redeemed the land and proved that naturally the soil has its fair proportion of inherent fertility and is capable of giving ample returns on capital invested, a good living for the owner and one of the finest homes in the State. The farm in question is "The Grove Stock Farm," situate in Nottoway county, near Burkeville, on the Norfolk and Western and Southern Railroads, owned and occupied by Mr. T. O. Sandy. The farm is a large one having an area of about 1,000 acres, but the owner wisely has not undertaken to bring all this area into a highly improved condition at once. He has pursued the course we have so repeatedly advised, made a few acres rich each year and kept them so, and gradually extended this area as the means permitted, until now he has over 100 acres producing as fine crops as the richest river bottom lands in the State, although all the farm is upland. The residue of the farm has been inclosed with a wire fence and is used for the pasturage of live stock which are gradually working down the rough grasses and weeds and bringing in a good wire and Virginia blue grass sod capable of carrying and keeping fat a heavy head of stock. As an illustration of the capacity of the improved land to produce crops we cite what has been grown on some of the fields this year. On one 20 acre field there has just been cut as fine a crop of corn as could be found in the State and which is good for from 50 to 75 bushels to the acre. On an 8 acre field adjoining this two tons of Timothy hay per acre has been cut and saved. Near by in a field of 6½ acres has been grown a crop of corn for the Silo which has been the wonder of the neighborhood. One man describing it said that the corn was as tall as a house and as thick as a forest. Mr. Julian Ruffin, a member of the State Board of Agriculture, and late President of that Board, who called to see the farm of which he had heard good reports, told us that he had never seen better corn grow on the Pamunkey flats on which he farms and farms well. This field was a grass sod plowed and fitted well for the crop in April and May. One ton of agricultural lime to the acre sown broadcast was the only fertilizer applied. The corn was planted the 20th May, the variety planted being Cockes prolific. It was planted in rows 3 feet 10 inches apart and the seed dropped

8 inches apart in the rows. The crop was cultivated level 3 times. A gentleman who called to see the crop just before it was cut was so impressed with the quantity of corn on the land that he determined to ascertain closely what number of stalks was growing upon an acre. By actual count made by himself and

of land, sufficient to feed a herd of 24 cows for 8 months. What a vision of prospective wealth to Southside farmers this opens when the thousands of acres in that section of the State now growing broom-sedge and pines are brought into subjection and properly farmed and managed. Near to this field another



HOLSTEIN HERD OF THE GROVE FARM.

Mr. Sandy the number was found to be 14,564. These stalks were not merely stalks, for nearly every one carried at least one ear and many 3 and 4 ears, the average for the whole crop being about 2 ears of good corn to the stalk. The product when cut filled two Silos holding 60 ton each or a total of 120 tons on the $6\frac{1}{2}$ acres. Silage made from such corn as this is worth much more per acre for feeding milch cows than an equal quantity of the best hay as it contains both long feed and grain feed sufficient to insure a heavy yield of milk. At a fair estimate the value of such silage as fed cannot be taken at less than \$8 per ton or \$1,000 worth of feed grown on $6\frac{1}{2}$ acres

one of 30 acres has grown a heavy crop of cow peas now made into hay with a yield of at least $1\frac{1}{2}$ tons to the acre. The wheat crop on the farm like that of much of the South this year was a failure, but the land having been seeded with mixed grasses and clover with the wheat, this crop came on and made a fine yield of hay. In addition to these crops Mr. Sandy has on part of the improved part of the farm as fine a pasture of mixed grasses as can be found even in Southwest Virginia, which carried all summer a heavy head of cattle, sheep and horses. The secret of success with all this land has been live stock and cow peas. Mr. Sandy is not a believer in

the use of commercial fertilizers for the purpose of permanent improvement of land, whilst not opposed to the use of some form of Phosphate for starting the growth of peas. For this purpose he has used slag meal and got good results. He is, however, a strong believer in the value of lime as an improver of the mechanical and physical condition of his lands. His experience in the use of lime he tells us has more than borne out all we have said in *The Planter* on the subject. It will now be asked by many Southside farmers what is the "money crop" of the farm. The answer is cream and choicely bred Holstein cattle, Dorset sheep, Hackney horses and Berkshire hogs. His herd of Holstein cows are heavy milkers, some of them giving as high as 4 gallons at a milking and few less than $2\frac{1}{2}$ gallons. His milk is separated on the farm and the cream shipped daily to Richmond. For this product Mr. Sandy has a constant demand for more than he can supply. The secret of his success in securing and maintaining this demand is that he guarantees the percentage of butter fat in his cream and sells it at a price based on this percentage. Thus if a buyer wants rich cream he gets it and pays for it, whilst the one whose trade only calls for thin cream also gets it and pays proportionately less. The separated milk is used to feed calves and hogs, being enriched with grain feed as required by the animals being fed. For his Holstein calves and Berkshire hogs he has built up a fine trade through his standing advertisement in *The Planter* and rarely has any surplus stock, in fact, he cannot begin to supply the demand for his hogs. To accommodate the cattle and other stock Mr. Sandy has built commodious barns and stables and wisely does not crowd them into the same building as that which he uses for storing his feed. In this way he runs less risk from loss by fire and keeps his stock in better health and condition. All his young cattle and other stock are grazed during the summer months on the outlying part of the farm not yet brought under improvement. The grass on this has improved so much year by year by the grazing of the different kinds of stock and the dropping of their manure that it now keeps them in fine condition. They are to-day as fat as though they had been feeding on the blue grass sods of the Southwest—of course the land will not yet carry so much stock per acre as those lands but when not overstocked will make as fine grown cattle as the best of those lands. The carrying capacity is growing year by year and when brought into cultivation we doubt not they will be found capable of producing heavy crops. Such is briefly a record of what has been done on a poor Southside farm in a few years. Why will

not others go and do likewise instead of growing only a few acres of tobacco and corn and letting the trust magnates and the grain speculators fix the price to be paid for the products. No country that breeds and feeds stock is ever a poor one. The experience of every section of the world proves the truth of this

TOP DRESSING GRASS LAND.

At the Rhode Island Experiment Station three plots of land were seeded in grass in 1898 with $7\frac{1}{2}$ pounds each of common red clover, redtop and 15 pounds of Timothy. These three plots were treated exactly alike excepting that one plot had received no nitrogen for 11 years while the second had received a small dressing and the third plot a large dressing of nitrate of soda annually since 1892. The large application of nitrate of soda yielded much the greater profit. In 1901 the value of the hay from the plot receiving the heavy dressing exceeded the cost of the fertilizer by \$40.70 per acre and for the 3 years of the experiment by \$90.72. In all instances the use of a complete fertilizer gave the best results. The plot receiving the full application of 63 pounds of nitrogen per acre in the form of 350 pounds of nitrate of soda to the acre yielded $3\frac{1}{2}$ tons of hay per acre in 1899, 4 tons in 1900, $4\frac{1}{2}$ tons in 1901 and 4 tons in 1902. The value of the hay exceeded the cost of the fertilizers by \$19.62 per acre the first year, \$30.40 the second year, \$40.70 the third year and \$32.74 the fourth year. The total excess in the value of the hay over the cost of fertilizers for the 4 years was \$123.46 per acre, or an average of \$30.87 per acre for each year. The fertilizer used in top dressing the grass consisted of 807 pounds of acid phosphate containing 16 per cent. of phosphoric acid, 200 pounds of muriate of potash and 400 pounds of nitrate of soda. From the results of the four years experiments it is concluded that an application of 400 pounds of acid phosphate, 200 to 250 pounds of muriate of potash and 350 pounds of nitrate of soda per acre would probably have given better net returns than the quantities applied. Top dressing run out land which is not filled with the proper kinds of grass roots is considered a waste of fertilizer. For such grass lands plowing and reseeded heavily is recommended.

GRASS SEED MIXTURES.

In a series of experiments conducted in Canada for several years, the following mixtures of grasses and clovers gave the best results. Tall meadow oat-

grass and Alfalfa made a yield of 3.2 tons per acre. Tall meadow oatgrass, orchard grass, mammoth red clover and Alfalfa made a yield of 3.1 tons per acre and Timothy and Alfalfa made a yield of 3.1 tons per acre. The best yields in 1902 were produced by Timothy with mammoth red clover, tall fescue with mammoth red clover, tall meadow oatgrass with mammoth red clover and orchard grass with mammoth red clover. Small grain crops grown after clover gave on an average for 3 years 833 pounds of grain more per acre than the same crops grown after grass.

SEEDING CLOVER ALONE.

Editor Southern Planter:

As I said in a former article I have seeded clover without cover crop in patches for many years past and must say that is the surest way to get a stand. When I bought this farm twenty-two years ago (I am not a farmer to the "manor born"), it needed much attention and I thought, plenty of clover sown on it. I asked my foreman what he could do with an oat stubble field with so much to do. He could do nothing but harrow it. I remarked that I wanted to sow clover on it after he got it in order. He was a good practical farmer but like nearly all the farmers then, thought that clover needed a cover crop. He strongly advised against it and said I would lose the seed and labor. Others, very intelligent men, to whom I spoke of it, took the same view. I had only the experience of a town vegetable garden to base my opinion on,—That plants that got plenty of sun, air and moisture were healthier and stronger than shaded ones.

I seeded the field (22 acres). It cost me about seventy-five dollars for labor and seed and hauling stones off, of which there were many, and mowing the weeds down in August.

The field yielded the next season 30 tons of hay and 40 bushels of clover seed at \$6 per bushel. with marked improvement to the soil.

This place has improved in yield per acre fifty per cent., due chiefly to clover and live stock. I am always glad to read your advice to farmers to sow clover, and sow it alone.

Rockbridge county, Va.

T. M. WADE.

ALFALFA IN SOUTHWEST VIRGINIA.

We are in receipt of a very fine specimen of alfalfa grown by Major W. W. Bentley, of Pulaski county, Va. Major Bentley says that the seed of the crop was sown on the 4th July, 1903. It was sown in

growing corn and made a good catch although the land was not inoculated with alfalfa bacteria. The plant sent, which was dug up in the middle of September, 2½ months after the seed was sown, was a part of the crop which grew on land at the end of the corn rows. The plant is a fine bushy one and measures *three feet in length* from the tip of the root to the top of the stems. This shows what a wonderful growth the crop is capable of making in a short time. There are, however, no nodules on the roots thus showing the land not to be inoculated as yet with the specific bacteria needed to ensure a permanent stand. Major Bentley proposes to procure inoculated soil and sow over the field and we doubt not then that he will secure a permanent stand. Whilst we do not advise the practise of seeding alfalfa in a standing crop of corn or indeed with a crop of any kind as it undoubtedly does better sown alone, yet this example shows that in a favourable season for growth it will succeed on fertile land when seeded with another crop. As Pulaski is one of the counties of Southwest Virginia with a high elevation we shall be anxious to learn how the crop stands the winter there.

HAIRY VETCH.

Editor Southern Planter:

On page 624 of the October issue I notice an article headed "Hairy Vetch." I will give you my experience with the crop. In 1901 I bought 2½ pounds of vetch seed and sowed it on a very small patch of ground and got 1 peck of seed. In 1902 I put that peck of seed on a quarter of an acre of land and got 2 bushels of seed. The vetch made a great growth on the land which had been in vetch before but not so good on the other part. Now while it was some trouble to get the crop harvested, it being put in with no other grain, yet it paid me for all the trouble I had with it. I could have sold the seed for \$10, besides getting a better crop of corn than I ever got off the land before, and I have a good stand of vetch yet. Will you please tell me how to get rye and vetch seed separated when they are threshed together?

Iredell county, N. C.

O. E. SHOOK.

The separation of the two grains is effected by the regulation of the blast of the fanning mill and by the use of appropriate screens or riddles in the mill. The one seed being heavier than the other when the blast is properly adjusted the barley will fall separate from the vetch seed almost completely. The perfect separation of the seed is then completed by the screens or riddles.—ED.

ENQUIRER'S COLUMN.

Enquiries should be sent to the office of *The Southern Planter*, Richmond, Va., not later than the 15th of the month for replies to appear in the next month's issue.

Unsigned Enquiries.

We have enquiries to hand frequently from parties who do not sign their names. Such is the case this month. *We cannot give attention to such communications.* For our own information and as proof of the bona fides of the writers we must require all enquiries to be signed by the writers. If they do not desire their names to appear in print they have merely to say so and we will take care that their wish is respected.—Ed.

Yield of Seed of Common Clover—Clover Hullers—Ticks on Cattle.

1. What would be the approximate yield in bushels of annual clover seed per ton of cured hay as cut with mower? Would one ton of such hay be an average per acre?

2. Can clover seed be successfully threshed with a grain thresher and shaker to separate the straw from chaff. I have a fanning mill with clover cleaning attachments.

3. Can you inform me from whom I could buy a huller? (My idea being to thresh the clover with grain thresher as above stated, purchase a huller to hull same, then run through fanning mill. I have the grain thresher and fanning mill and do not wish to go to the expense of buying a regular clover thresher and huller, as I am only experimenting with clover seed raising.)

4. To what extent would hay be damaged for cow feed if allowed to stand until seed were matured?

5. If clover be fertilized with 400 pounds acid phosphate and kainit, 3 of acid to 1 of kainit in January or February, would it not be a sufficient application to make a fair crop of clover and also be a sufficient fertilizing for a crop of corn or cotton to follow clover?

6. Would the spring rains leach it from the land? Said lands are thoroughly ditched highlands which were improved this year with above application of fertilizer on them at time of sowing?

7. Is it necessary to apply nitrogen to either red or annual clovers? I have read with interest your articles on tick fevers. I have 50 head of cows and on which I venture to say there are not a dozen ticks and have not been in 3 years. I never allow them to run in regular pasture from October 15th to April the 1st. The lots on which they run in winter have no stock on them in summer.

Warren county, N. C.

W. A. CONNELL.

1. The yield of Crimson clover seed runs from 3 to 10 bushels to the acre. An average crop will make more than a ton of hay per acre probably half as much more. We have known over 2 tons made.

2. We have heard of clover seed being threshed with a grain separator but we think there would be much loss of seed.

3. Any of the agricultural implement dealers advertising in *The Planter* will supply you with a huller.

4. All hay that is allowed to mature seed is greatly reduced in value as feed for any kind of animals. In the process of producing and maturing the seed the feed value of the crop is largely transferred from the stems and leaves into the seed and this being removed or lost by shattering carries with it this food. In experiments made at the Illinois Experimental Station by Professor Hunt and others it was found that the protein (the muscle and flesh forming matter) and the carbo hydrates (fat forming matter) both decreased as the clover neared maturity or the seed forming and ripening stage. At full bloom the crop contained 400 pounds of Protein. When three-fourths of the heads were dead this was reduced to 379 pounds. The fat was 197 pounds at full bloom, 150 pounds when three-fourths of the head were dead, the carbo hydrates were 1,052 pounds at full bloom and 1,024 pounds when three-fourths of the heads were dead. In Pennsylvania a considerably greater loss than this was shown when all the heads were dead ripe nearly one-fourth of the feed value having gone. After threshing much further loss would be shown as a large part of the leaves would be beaten into dust.

5. The application of mineral fertilizers as a top dressing on grass or clover usually has little effect on the yield of the crop as they are so slowly soluble. They should be worked into the land previous to sowing then they will be acted on by the soil moisture and the microbes in the soil and are made available. The application suggested should be of value if applied in this way to both the clover and corn or cotton.

6. No. 7. No.—Ed.

Keeping Sausage.

I shall be very glad if some of the readers who have had experience will give me, through the columns of *The Planter*, the best method of keeping sausage fresh for spring and summer use.

Also state an infallible remedy for keeping hams free from insects, etc.

AN ENQUIRER.

Pittsylvania county, Va.

Will some reader please answer? The rubbing of the hams with borax and black pepper will keep off insects.—ED.

The Use of Mineral Fertilizers.

I bought a rundown farm two years ago, but it has been getting better each year by cow peas, soja beans, &c., and what little manure I have been able to make. My hands have been tied for want of capital to buy stock. Although I am 60 years of age I have got the backbone to believe that if Mr. Bellwood can get his farm up as he has done, I can also by work. I have kept clean over 10 acres of peanuts and over 13 acres of corn and other crops without one cent of hire. I work two horses on all my tools, yet I want more light. Does not Mr. Bellwood use mineral fertilizers? You say on page 620 that he does not use any commercial fertilizer. On page 623 you say that the legumes must have them. Please give me light on that, and I have no doubt but there are others that your answer will help.

GEO. A. GREENE.

Nansemond county, Va.

This question of the necessity for the use of mineral fertilizers in the growing of the leguminous crops is one which is likely to require much reconsideration in the light of the information now given us in the Bulletin from the Department of Soils noticed in this issue. It is certain that these crops call for the plant food supplied by the mineral fertilizers and up to this time it has been thought necessary to supply them liberally and the results have seemed to justify the practise. But if as now seems to be the case all lands have a more than sufficient supply of these mineral foods for the growth of crops for years to come the problem would seem to be to devise the means for making these natural supplies available and thus avoid the necessity for purchasing them. The available means seem to be deep breaking and fine cultivation of the soil so that it may become permeable by and capable of holding and feeding to the crop a heavy percentage of the water naturally falling on the land. This has been undoubtedly the cause of Mr. Bellwood's success in growing these leguminous crops successfully without the application of mineral fertilizers. The process is a slower one than that of supplying the need by buying the goods, but we believe that in the long run it will be the most successful and profitable as it will result in more permanent improvement of the soil. For years we have advocated this plan strongly from our practical knowledge of its success in England where we know some of the most profitable farms never to have had an ounce of commercial fertilizer used on them since they were brought into cultivation—hundreds of years ago—we have not, however, thought it wise

to ignore the value of commercial fertilizers as adjuncts to good farming and as a means of securing quicker returns from badly managed land. Many a poor man might die from starvation whilst waiting for the returns from his land if he neglected the means of securing the quicker returns which these fertilizers offer him. We believe that the true course to follow, when the work of restoring fertility to a worn out farm is undertaken, is to use every means of improvement, plow deeply, cultivate fine, start a good system of rotation of crops which will give a frequent recurrence of recuperating crops (legumes) and help the good work by a judicious application of mineral plant food especially phosphoric acid on the leguminous crops and then as the land becomes more productive, to limit the use of these fertilizers to the growth of those crops which have a high initial sale value and can be easily transported and be readily and quickly sold. These crops, like Irish and sweet potatoes and other truck and garden crops and also tobacco, in the sections to which it is adapted, can bear this extra cost, whilst bulky crops like corn and the other cereals, and hay which have a lower initial value and are more costly of transportation and in which, therefore, the item of freight is a large factor in the price, cannot afford to have so heavy a charge as that of bought fertilizers added to the cost of their production. These should be converted at home into a more condensed form and of a higher initial value and in the process of this conversion the manure made by the stock used in the conversion will make possible the production of other crops at a cost which they can bear and make permanent the improvement of the fertility of the land.—ED.

Money Crop in Fairfax County, Va.

What is the money crop in Fairfax county, Va.?
Union county, N. J. JACOB KAMMERER.

Truck and dairy products for the Washington markets and fat cattle and grain. There are also canneries in the county which put up surplus truck produce.—EL.

Texas Fever Ticks—Hollow Tail.

Referring to articles on ticks in late issues of The Planter I beg to submit that ticks propagate themselves on rabbits and dogs. The chances of those ticks which live on dog meat reproducing themselves effectively is pretty slender, with rabbit-ticks it is otherwise. One season a piece of land which had not been in pasture for upwards of twenty years but was a favorite location for rabbits was fenced and when cattle were turned in proved to be infested with

ticks. In view of the above the only simple and sure way of getting rid of ticks is to get the cattle up once a week and pick off the ticks by hand till there are no more.

The diseased tails referred to by your correspondent at Shelby county, Ky., were very probably tuberculous and cutting off above the affected place is the only practical remedy. LOUIS DELACROIX.

Granville county, N. C.

We have no record of Texas fever ticks ever having been found on either dogs or rabbits. They have been found on deer and possibly the pasture referred to may have been infected from this source. As it was apparently an unfenced pasture may not some cattle have strayed into it and thus infested it? We think ticks on rabbits would have as little chance of propagating themselves as those on dogs.—ED.

Fertilizer for Irish Potatoes, Tobacco, Cotton, Asparagus and Corn.

Would you kindly inform me through your valuable columns:

First—Whether the following mixture would make a good formula for an Irish potato fertilizer, and (b) if so what quantity of it should be applied per acre:

- 650 pounds cotton seed meal.
- 300 pounds nitrate of soda.
- 800 pounds dissolved bone.
- 250 pounds sulphate potash.

Second—(a) Whether the following mixture would make a good fertilizer formula for tobacco, cotton, asparagus and corn, and (b) if so the respective quantities of it that should be used per acre on the crops above mentioned:

- 650 pounds cotton seed meal.
- 1200 pounds dissolved bone.
- 150 pounds sulphate potash.

Charleston county, S. C. NEW SUBSCRIBER.

1. Yes, the ingredients mentioned in the proportions named will make a suitable fertilizer for Irish potatoes. Apply from 500 to 1,000 pounds to the acre.

2. For asparagus reduce the bone to 1,000 pounds and increase the potash to 300 pounds. Apply 500 pounds to the acre. For cotton. Experiments made in South Carolina indicate that the maximum quantity of fertilizer that can be in general used with advantage are such as will furnish 50 pounds phosphoric acid, 15 pounds of potash and 20 pounds of nitrogen to the acre. 400 pounds of 14 per cent. acid phosphate or dissolved bone, 150 pounds of kainit and 300 pounds of cotton seed meal per acre will meet this requirement.

For Tobacco. The fertilizer needed is one rich

in nitrogen and potash (in the form of a sulphate), and low in phosphoric acid. The following ingredients and proportion have given excellent results: 160 pounds of dried blood, or 80 pounds of nitrate of soda and 80 pounds of dried blood to supply the nitrogen, 120 pounds of sulphate of potash and 114 pounds of acid phosphate.

For Corn. The dominant factor in the fertilizer should be phosphoric acid. Potash is of service frequently in sandy soils, but not usually needed much in clay soils, whilst nitrogen is only called for in soils deficient in vegetable matter. Wherever this is abundant the crop will get all it needs. It is becoming increasingly certain that corn has the power in some way to assimilate nitrogen from the atmosphere like the legumes. Mix 1,200 pounds of 14 per cent. acid phosphate, 600 pounds of cotton seed meal and 200 pounds of muriate of potash and apply 500 pounds to the acre.—ED.

Grape Vines Diseased.

I have some three year old grape vines which last year matured a full crop of nice grapes the latter part of September. This year the leaves turned brown and commenced to fall off by the first September, the grapes shrivelling and falling and many stems dying so that the whole bunch would fall off. The few grapes yet on the vines are from full green to ripe. Some of the present season's growth of wood is dying. Soil is rich, sandy loam with well drained red clay sub-soil. Location elevated, with sun all day and only moderately moist. Please say in your next issue what is cause of trouble and what remedy and when to apply same. SUBSCRIBER.

Appomattox county, Va.

No doubt your grapes have been attacked by Black Rot. Refer to the Spray Calendar in the March issue this year for the remedy.—ED.

Ice Supply.

Can you give me any information on making and storing ice? I have an ice house, but no pond or running water. My idea is to hold the well water and let the air freeze it. I have a wind mill. If any of your files have the above information shall be glad to have the information. HENRY TWYFORD.

Henderson county, N. C.

You will find it a very tedious and uncertain means of getting a summer's supply of ice to have to rely on pumping water into a vessel or tank and then when it happens to freeze removing the ice to the house. Better make a shallow pond with a large surface and pump this full now and keep it full until all the ice needed is secured from its surface.—ED.

Trucking, Garden and Orchard.

WORK FOR THE MONTH.

Cabbages may be planted out at the end of the month for the early spring crop in the trucking sections of this and adjoining states. The work of preparing and enriching the land should have attention up to that time. The better the preparation the greater will be the chances for a successful crop. Cabbages are great feeders, so do not pinch them of food.

Lettuce may be set out in cold frames for winter and early spring cutting. The soil for filling the beds should have been got ready during the summer and should now be in a sweet friable condition, well supplied with vegetable matter, and should now be enriched with some cotton seed meal acid phosphate and muriate of potash. The old soil in the frames should all be removed as it is very apt to cause the spread of fungus diseases and damping off. Keep the frames open as long as the weather is mild.

Orchard and small fruit planting and pruning should have attention. In this issue will be found an article on setting out an orchard.

Celery should be earthed up to blanch it. In doing this work see that the earth is kept out of the plants and only closely banked around them.

Cover asparagus beds with a heavy coat of farm yard manure, first removing all old stalks and trash.

All land not needed for other crops should be seeded in rye to conserve soil fertility.

PLANTING AN ORCHARD.

In your valuable paper I note that you strongly advise your readers in this section of Virginia to apply themselves to "Fruit Growing." I intend to set out an orchard of winesaps, peaches and pears this autumn. Please instruct me, in your next issue, as to the setting and caring for a young orchard. Also kindly give me some "hints" as to improving the fruit of an old orchard, and oblige.

A NEW FARMER.

Pittsylvania county, Va.

The first consideration in setting out an orchard should be the situation. Let this be on high well

drained land preferably with an exposure to the east or Northeast. This will secure good air drainage and has a tendency in restraining too early blooming and consequent loss of the crop by late frosts. The next consideration should be the preparation of the land. This should be deeply plowed and if possible subsoiled all over the site of the intended orchard, but certainly in each line of intended trees. If subsoiling be not practicable from want of a subsoil plow or sufficient team, then the subsoil in each place where a tree is to be planted should be deeply and finely broken with the mattock or grubbing hoe. Trees will never make the growth they ought to do when set out on hard unbroken subsoil or hard pan. Let this work of breaking and preparing the soil be done as early as possible that the soil may have the benefit of the winter frosts and thorough aeration. Having thus prepared the land the location of the sites of the trees should be fixed. To secure perfect alignment of the trees which is essential in order that cultivation of the orchard during growth may be practicable and convenient the following method should be adopted. First decide on the distance the trees are to be set apart. For apples and pears this should be from 30 to 40 feet each way. For peaches from 20 to 30 feet is sufficient. Then take as a starting point the position of the first tree and sight a straight line from this point to the opposite end of the orchard parallel with the side of the lot. Place in this line (at prominent points if the land is rolling or hilly) 6 foot poles which may be several hundred feet apart so that three may be seen in line at once. With the two end poles place others in line in the opposite direction at such distances from each other as the trees are to be planted. Set intermediate poles in line on these new rows. Provide pegs a foot long in sufficient numbers to place one at the position of each tree. Provide also a coil of light trellis wire or stout cord of from 125 to 135 feet long according to distance the trees are to be set apart. Fasten a piece of white rag on this wire or cord at each distance the trees are to be set apart. Place a stout pole at each end of this wire or cord to be used as sighting poles. This is to be carried by a man and boy. Place the sighting pole at the position of the first tree then direct the boy to walk in the line of the poles set up for the first row. Stretch the wire or cord tight and let another boy with an armful of pegs place one in the ground at each rag

mark on the wire or cord. Proceed in the same way with each row of trees carefully sighting the originally set posts to see that perfect alignment is preserved not only in one direction but in all directions. The trees should line both horizontally and obliquely. The next work is digging the holes. Provide each digger with a 5 foot board 6 inches wide with a notch in the centre and holes at each end. Place the plank in line with the rows, the centre notch over the peg indicating the site of the tree and pin the plank down with a peg in the end and leave the board in position until the tree is planted. Turn the board on the peg out of the way until the hole is dug. The hole should be 4 feet across and at least 15 inches deep. Throw the top soil on one side and the subsoil on the other side of the hole. Some orchardists advise the using of compost or well rotted manure in planting, but if the surface soil is at all fertile we prefer not to mix anything with it, but if very poor mix some woods mould or rich soil and a little manure with this surface soil at each hole and you are then ready to plant the tree. Let the trees selected for planting be young, stocky and well rooted, never mind the height if you have a good stem and a good root. They will make height soon enough. In setting the trees the guide board is again turned round on the peg across the hole and the notch in the centre will then indicate the place to plant the tree. Raise a small mound of the surface soil right under the notch, set the tree on the top of this letting the stem come in the notch. Press the tree down gently until the surface of the soil is two inches above the crown of the roots. The planter should then hold the tree firm and as the surface soil is being thrown in work it in among the roots and pack it around them. Tramp the soil firm and fill level with the subsoil on top, leaving the soil slightly raised around the tree. Then mulch the ground 2 or 3 feet around the tree with coarse litter or leaves to prevent evaporation and drying out. After the young tree is set cut off entirely all side branches and cut back the stem from one-third to one-half the last year's growth. Let the top grow the following year retaining three or four branches at from $4\frac{1}{2}$ to 5 feet above the ground. The land between the trees may grow a crop of corn or other cultivated crop the first year. This will ensure cultivation of the land, but do not disturb the mulch around the trees the first year, and be careful in cultivating later that the tree is not injured by the single-tree or traces. Better leave 2 or 3 feet next each tree uncultivated by the plow or cultivator and work with a hoe than damage the bark of a young

tree. In the fall after planting, when the corn or other crop is removed, plow and seed in crimson clover to be turned down in spring, and follow with a crop of cow peas. These crops may with advantage be fertilized with acid phosphate and muriate of potash 200 or 300 pound to the acre. In making the selection of varieties to be planted the distinction between a commercial orchard and one for domestic use should be clearly borne in mind. In a commercial orchard where the object is profit on the sale of the fruit, plant only one or at most, two varieties, selecting those specially adapted to the location. What the wholesale fruit buyer calls for is a large crop of a single variety. In an orchard where the fruit is to be used at home there should be planted a few of several varieties, a few summer, a few fall, and a few winter ones so that there may be fruit for all seasons. We should advise caution in planting pears. The blight is such a constant visitor in the South that there is but little satisfaction in attempting to grow this fruit. The Seckel and Keiffer are about the only varieties which can be relied on to stand. Of the better varieties Bartlett is perhaps the most resistant but it blights badly. In planting peaches take the advice of a good nurseryman having local knowledge. The Elberta is perhaps the best and most profitable market peach. We will say something as to renewing an old orchard in our next issue.

ORCHARD AND GARDEN NOTES.

Editor Southern Planter:

The horticultural exhibits at the Southwest Virginia Fair at Radford were good in some respects. Variety of exhibits were lacking owing to the lateness of the season. Considerable enthusiasm was aroused among farmers and horticulturists in regard to the best specimens grown. The collection of apples was quite good. Those who saw the apple exhibits were convinced that this part of the State, while not considered in the "apple section," could grow fine specimens of Winesap, Baldwin, Fallawater, Virginia beauty, Ox pippins, and Roxberry russet. The specimens that grew on the higher, red lands were much more beautifully colored, as might be expected, than those that grew on the lower, valley lands. I believe that there is some as fine red apple land in this part of the State as one will usually find, but we are just learning where it is. This subject should receive most careful consideration by all those who are thinking of setting orchards. Highly colored apples grow best on the red clay soils, and

we usually find such soils on rather high, rolling land. As I drove along to the fair at Radford I noticed an orchard of one-half winesap trees so loaded with red apples that the trees were breaking badly. Near by were thousands of acres of just as good winesap land. While this part of the State is noted far and wide for blue grass and fat stock, still, I see evidences of a good reputation being made for "red apples." This season we are simply overloaded with apples, but next season the crop will be short, since we have let our trees overbear. We have not learned how to take care of our trees nor how to market the crop when grown. In fact most of the orchards here have not been planted for commercial purposes. Hence there is usually a small per cent. of each variety, and some orchards have as many as twenty-five varieties in them. The experimental stage with varieties is largely passed and it is time now that we plant orchards for definite purposes in this part of the State also. We need more winter fruit and less summer fruit.

Another fact brought out most forcibly by the exhibits at the Fair was the superiority of sprayed fruit over that unsprayed. Sprayed fruit took the first premium for best collection of apples. The specimens were larger, cleaner and of a more beautiful color. The usual number of persons were heard to say that they had just as fine specimens at home but did not bring them for some reason.

While this was the first time the Association offered premiums for horticultural and agricultural exhibits, still a good beginning has been made and we look for much larger exhibits in these lines next year. There is talk also of making the Fair an inter-state fair, which, if done, would bring together immense collections from the farm, orchard and garden.

There is but little that can be done in the orchard and garden this month except to continue to gather and store away the crops for winter. Of course all weeds that are maturing seed for next year's crop to give us the backache in destroying should be gathered up at once.

Specimens of apples affected with bitter rot will usually be found hanging on the trees late in the fall. Gather these and destroy them as time will permit.

Cut off all blighted limbs on apple and pear trees eighteen inches below the affected area and burn them. This is one of the best things to do for blight and it should be done with the greatest care in the fall and winter while the sap is dormant. Any diseased tissue that may be left over till spring will

serve as a source of infection from which blight is apt to spread as soon as growth commences again in the spring.

R. H. PRICE.

Montgomery county, Va.

VIRGINIA STATE HORTICULTURAL SOCIETY.

The programme for the eighth annual meeting of this Society to be held at the Court House in Pultaski City, Va., on the 2nd and 3rd December next has just been issued. The meeting promises to be a most interesting one as the different sessions will be addressed by some of the most noted fruit growers and horticulturists on topics of the greatest interest and importance to fruit growers and truck farmers. Amongst those scheduled to address the meetings are the Hon. S. B. Woods, President; G. H. Powell, of the U. S. Department of Agriculture on "Handling Fruit for Cold storage." L. H. Derby, of Woodside, Del., on "Apple Culture in Delaware," Prof. Price, of Long's Shop, Va., on "Small Canning Factories in Virginia," Prof. Van Deman, Prof. Alwood, S. H. Lupton and Geo. E. Murrell on other topics of interest. The Governor of Virginia is also on the programme for an address on "How best to advertise the Resources of Virginia with special reference to the State Exhibit at St. Louis." There will be an exhibit of fruits and vegetables for the premiums mentioned in our last issue. The following are the classes for exhibition. Each exhibitor must be a member of the Society and the exhibit must be the growth of the exhibitor.

1. Best plate of Albemarle Pippins—Diploma and prize.
2. 2nd best plate of Albemarle Pippins—Diploma.
3. Best plate—"Grimes' Golden"—Diploma and prize.
4. 2nd best plate—"Grimes' Golden"—Diploma.
5. Best plate—Arkansas (Black Twig)—Diploma and prize.
6. 2nd best plate—Arkansas (Black Twig)—Diploma prize.
7. Best plate—York Imperial—Diploma and prize.
8. 2nd best plate—York Imperial—Diploma.
9. Best plate—"Winesaps"—Diploma and prize.
10. 2nd best plate—"Winesaps"—Diploma.
11. Most attractively packed box package of apples—Diploma.

(This exhibit must illustrate grading as practiced by exhibitor.)

12. The best exhibit of winter apples harvested from sprayed trees (number of varieties not less

than 3 or more than 10.) Diploma and "Empire King" Spray Pump.

13. 2nd best exhibit of winter apples (same conditions as above)—Diploma.

14. The best winter seeding apple—50 apple trees (offered by Mr. J. A. Young, Greensboro, N. C.)

15. The most promising new variety of apples—Diploma.

16. (Sweepstake) for the best plate of any of the above varieties—Diploma.

17. Best collection of any varieties—Diploma.

18. Best exhibit of vegetables—Diploma.

19. Best exhibit of ornamentals—Bucket spray pump offered by Sydnor Company, Richmond, Va.

20. Best collection of vegetables—Prize, collection of garden seeds to value \$2.50 (offered by Messrs. T. W. Wood & Son, Richmond, Va.)

The prizes will be selected from the prize list when completed for the different classes, except those offered for particular displays (which are noted above.)

Prizes will be offered for 2nd best collections if there are sufficient for that purpose.

Further information as to the rules governing these exhibits and the time and place of entry may be obtained on application to the Secretary, Walter Whateley, Crozet, Va.

By special arrangements, railroads have agreed to rates as follows:

C. & O., R. F. & P., Washington and Southern will give a special rate of one and a third fares for round trip by card order, apply to Secretary or local Vice-President for card orders.

N. & W., A. C. L., S. A. L., and Southern Railway four cents per mile one way distance for round trip on application to local agents. All tickets restricted to continuous journey in each direction and will be sold November 30th and December 1st and 2nd, final limit 7th, 1903.

Maple Shade Inn offers special rate to members at \$1.00 per day (American plan.)

Hotel Pulaski will accommodate members at \$1.00 per day (American plan.)

FORCING RHUBARB IN THE DARK.

During the winter of 1898 and 1899 the Department of Horticulture at the University of Ohio first attempted the forcing of rhubarb in the dark and in so far as we know this was the first attempt in this country to force this crop in any other than the usual way, which had been common for a long time. A quotation from "The Forcing Book," by Professor L. H. Bailey, will sufficiently describe the old method. "Thoroughly established clumps are dug in the fall, and these are packed in beds under-

neath the greenhouse benches, sifting the soil in tightly between the clumps, and then covering with from two to six inches of soil. The temperature should range as for lettuce and roses, or for very quick results it may be much higher. * * * About four or five weeks after planting under the benches, is the usual time required for the first profitable cutting. Paragon and Linnaeus varieties may be used for earliest results, but the best crops are to be obtained from some of the larger kinds, like Victoria and Mammoth."

From the first the attempt to grow this crop in total darkness met with success, and now the dark grown product can be found on the Columbus, Ohio, market from the first of January until the outside crop makes its appearance. In the first quarterly of the Journal of the Columbus Horticultural Society for 1899 the results of this first experiment and the methods employed were described by J. F. Cunningham, then Assistant in Horticulture and Forestry, at the University. For the last five years the Horticultural Department has been profitably engaged in this new industry, carried on in the manner described in the above paper, with some few modifications worthy of note which have already been mentioned in notes from time to time since the first publication.

Until last year crowns from three to five years old were used for forcing purposes. In fact, it was thought that even the three-year old crowns were too young to be forced profitably. Last winter, however, we were led to try seedling roots, through rather unexpected and perhaps unusual conditions. Seed of the Linnaeus type was sown April 7, 1902, in a rather sandy soil in drills twenty-four inches apart. The seed came up readily and the summer was very favorable for its growth. The young plants were cultivated once a week until the leaves prevented the passage of the cultivator between the rows. The plants were not thinned, the idea being simply to grow plants to transplant the following spring and allowed two more years' growth before forcing. The plants were very thick and would undoubtedly have made a better growth had they been thinned early in the spring. As it was, however, the young plants made a wonderful growth. Visitors refused to believe that these leaves, many of them a foot across, with stalks fifteen to twenty inches long and an inch thick, were produced from seed sown the previous April.

Having more of these plants than we cared to transplant, and being unable to secure old crowns to fill our cellars, we determined to use every other row of these seedlings for forcing. Accordingly, the roots were plowed out early in the winter after they had been thoroughly frozen and thawed again (the work should be done before the ground freezes at

all), and the cellar filled. A number sufficient to fill the cellar the second time was spread in a thin layer on the ground and covered with a thin covering of earth to prevent drying. Two crops were thus secured from the cellars during the winter.

The roots were packed as closely together as possible in the cellars, care being taken to have all the crowns up, leaving walks about a foot wide every four feet. Soil was carefully sifted between the roots which were finally covered about two or three inches deep. The kind of soil used is not of so much importance, as the stalks get their nourishment from the food stored in the fleshy roots. Any good garden loam will do. The whole was then thoroughly soaked with the hose and the room made perfectly dark. In a very few days the stalks began to push through the soil and in four weeks we pulled the finest rhubarb we have ever seen.

From these small roots we obtained two pullings of splendid stalks, two more of only fair stalks, and two or three more smaller pullings of rather small and spindly stalks. The first pulling is always the best. The crop lasted about four weeks, making eight weeks in all that the roots occupied the cellar.

The exhausted roots were now forked out of the soil and a new supply brought in, using the same soil to cover the second crop as was used for the first. The second crop was simply a repetition of the first excepting that the temperature ran a little too high during the latter part of the period and we got more spindling stalks. The temperature should never go above 60° F., unless quick results are wanted at the expense of quality and quantity.

We give the following average measurements and weights of twelve stalks, which may be of interest:

- Average length of stalk, 17.33 inches.
- Average length of leaf blade, 4.45 inches.
- Average total length of leaf, 21.79 inches.
- Average width of leaf blade, 3.02 inches.
- Average weight, 4.64 oz.

The crop sold for from 60 cents to 75 cents per dozen bunches, there being from four to six stalks in a bunch. From three hundred and seventy square feet of cellar space we sold \$35.55 worth of rhubarb. This yield, we believe, can be materially increased, yet when it is remembered that this return was obtained from space that would otherwise have been idle, and from plants less than one year old, which had not been grown with the intention of forcing at this age, the possibilities of the industry becomes apparent.

The stalks receive practically all their nourishment from the food stored up in the fleshy roots during the previous period of growth, and naturally the larger the roots, provided they are healthy and vigorous, the larger will be the total crop received when forced either in the light or in the dark. The roots

forced in the dark will be more productive than those grown in the light, because all the strength of the root is directed into the stem, rather than partially into foliage. If by extra care in preparation of the soil, selection of seed, thinning and cultivating we are able to obtain roots large enough to secure profitable returns within the year, we have made an important step in supplying the market with this well known garden esculent throughout the winter months and at a profit to the grower.

The fact that under the old system the roots must occupy the ground from three to five years has prevented many gardeners from forcing this plant except in a small way. A very large immediate yield lost its munificence when the rent on the ground occupied for these years was considered.

By planting the seed on heavily manured loam soil and thinning the plants to a distance of one foot in the rows, with proper cultivation and mulching if need be, we believe roots can be grown in a single season which will give twice the yield received from our experiment. If it can be done with certainty from year to year the question of obtaining crowns for forcing purposes will be solved. It is worthy a trial at least, and we hope to experiment further in this direction.

V. H. DAVIS.

Journal of Columbus Horticultural Society.

In England the practise of forcing rhubarb in the dark for the winter markets has been carried on successfully for more than 30 years to our knowledge and all the large markets of the country are constantly supplied with beautifully grown stalks running from 2 to 3 feet in length and of a bright pink color from December to the close of winter. This rhubarb is in large demand there and makes delicious pies and dishes of stewed fruit. There is no reason whatever why we should not have the same demand here and thus a market be made for a product easily produced and of a most wholesome character. Here in the South the roots should be dug from the open ground and be placed in the cellar in November and December as soon as growth has ceased and the leaves have died down.—ED.

Gathering Apples.

Can you tell me what is the best time to gather apples? They are ripe and falling fast. Do you gather them before or after frost? I have had mine gathered and spread out on a floor. They usually rot very fast.

SUBSCRIBER.

Amherst county, Va.

Apples should always be gathered from the trees a little under ripe, rather than fully ripe. When the seeds are turning brown and the stems will part readily from the twigs when the fruit is pulled lightly the crop is ready for gathering.—ED.

Live Stock and Dairy.

HOLLOW HORN—HOLLOW TAIL.

Editor Southern Planter:

The stand you take, re "hollow horn," "hollow tail," in your September and October issues is the correct one. There are no such diseases (except as you say in the imagination), from which cattle suffer generally. These organs—the horn and tail—are not entirely exempt from diseased conditions, but even those are rare, and most generally develop only local symptoms. In twenty years practical experience in the veterinary profession, I have seen cattle suffer almost every known acute disease to which they are heir, and then be subjected to further torture, at the hands of ignorant people, upon the supposition that they either had "hollow horn," or "hollow tail" (and more frequently both), when upon a thorough and intelligent examination, both were found in perfectly normal condition except for the damage done by the barbarous treatment to which they were subjected. The trouble, sir, is this, people don't investigate intelligently for themselves and acquaint themselves with the normal appearance of these and other organs, but merely jump at conclusions, and they are satisfied with what their grand-parents told them for that must be true. If such arguments were sound, the veterinary and other scientific professions would not make the progress they have made, especially the past decade.

People who are ignorant upon the subject do not realize the dangers they are exposing their animals to by boring holes in the horns of animals, and pouring in all sorts of irritants, of unknown action as far as they are concerned, and leaving the holes open exposing them to attacks of many parasites, especially the Blow fly. Many such cases do suffer as the result, and confirm the diagnosis of their tormentors, when it actually becomes an I-told-you-so affair. It would be unfair if I were to stop here merely throwing out what many would call an unjust criticism of their opinion, therefore, my real purpose in addressing you upon this subject is to clear up at least some of those old-time ideas which our profession have taken from the mysterious and arrayed among those which are now understood at least more thoroughly.

The name "Hollow Horn," or Horn Evil, got its name from the unnaturally low temperature of the horns, which is an accompanying symptom of some forms of digestive disturbance, especially impaction

of the rumen with solid food, where the nerve force is weak or deficient, and the peristaltic action of the muscular coats of the stomach is suspended. Here we find the animal standing with an arched back, disinclined to move, emits a grunting sound when breathing, pulse quick and weak, bowels constipated, or an offensive diarrhœa, *horns cold*, rumen pits on pressure with the finger and pit remains, showing that its coats are inactive, loss of cud. Strange as it may appear, the dullness and refusal of food and cold condition of the horns, especially the latter are the only conditions taken into account. Here is a case of "hollow horn," a gimlet, some salt, pepper and turpentine are the requirements. No readers, the cow has indigestion and wants a purgative of epsom salts, a liberal amount of clean pure water to drink, followed by tonics, stimulants and more careful and too frequently more generous diet and care. Many young cattle especially in the spring of the year, or fall after a dry summer, become much emaciated for want of proper food and present symptoms of general debility, accompanied by unthriftiness. On these animals the hair is dry and stands up; mucus membranes become pale (bloodless) swellings appear under the jaws and dependent parts of the body. Those cattle want better care and a gradually increasing better diet of good well cured clover hay, (not old bleached out stuff, that only contains the original woody fiber), with corn and bran, and let me advise the reader that if his cattle are not worth this sort of care then if they wish to remain in the cattle business profitably the only reasonable solution of the matter is, buy some that are. Improved breeds are within the reach of all to-day and here is an argument which hits the scrub bull pretty hard. While these forms of indigestion and emaciation are not the only ones that give arguments to the "hollow horn" apostle, they are the most frequent, and a large per cent. of that goes back to want of care and proper feeding.

Under the head of "hollow tail" besides what I have enumerated, for I have yet to find any symptom by which it may be distinguished, we do find a few, at least more numerous conditions in support of the argument in favor of a real disease, yet when investigated it is almost entirely the *effect* instead of the *cause*. Grub in the tail might and no doubt does exist. So it exists in the back, yet are all cattle with grubs in their backs, late in the winter and early

spring, subjected to such treatment as splitting open the skin and pouring in salt and pepper and why not? One who knows the anatomy and physiology would naturally suppose that those in the back were in a position, in closer proximity to vital organs, to create more disturbance than those at the end of the tail. The fact is this, when grubs as they are called, are found to exist in the tail they are merely the larva of some parasite, and probably a stray *Hypoderma Lineata*, which is actually doing less damage there than its kin folk, which are in their proper place, and destroying the skin as they develop and prepare their exit. Again the tail is an organ which frequently suffers injury and goes through the same changes as other organs similarly damaged. Then again during extreme emaciation from want of care it is not infrequent to find the end of the tail suffer for want of sufficient circulation to keep the tissues nourished, being farthest from the center of the circulation. This is also an effect and not the cause. Again, cattle may have ever so good care and an abundance of apparently good food, yet if such food is contaminated with the fungus disease known as ergot, which frequently follows a wet season, we invariably have a starved condition of the tissues commencing at the end of the tail, tips of ears and above the feet, accompanied by convulsions, which is known as convulsive ergotism. The reason is simply this, the action of ergot on the system is to lessen the caliber of the arterioles (small arteries under control of the nervous system) and restrict the flow of blood to the parts. Those situated farthest from the heart or where the blood pressure is least, are the first to suffer, and a dead, dry gangrenous condition of the feet, ears or tail, are the effect and not the cause. The treatment does *not* consist in removing the dead tissue, but to stop the supply of ergot, remove the cause.

I beg to thank you for allowing so much space and patience to this matter, and if only we can convert a few erring ones and induce them to investigate impartially for themselves, and stop their barbarous treatment where it does absolutely no good and often much harm, but go at things more intelligently, by treating the cause rather than the effect, then we have this day "truly done something."

JOHN SPENCER,

Professor Veterinary Science.

Virginia Poly. Inst., Blacksburg, Va.

TICK OR TEXAS FEVER.

Editor Southern Planter:

I heartily agree with you on this subject of Texas Fever ticks as stated in your October issue. If the

instructions laid down there were as vigorously followed out as the quarantine authorities have been opposed on this tick question in the State of Virginia the entire State would soon breathe the air of freedom as far as ticks and Texas fever are concerned. I am personally acquainted with Dr. Butler, the author of your quotation, as we were graduates of the same class, and know him to be a gentleman of sound judgment and indomitable perseverance, such as every State should have managing its quarantine affairs.

Texas Fever can only be transmitted (except by direct inoculation) by the Texas Fever tick (*Boophilus annulatus*) and upon the eradication of this tick and this only can the disease be stamped out and the Federal quarantine be dispensed with.

JOHN SPENCER,

Professor Veterinary Science.

Va. Polytechnic Institute, Blacksburg, Va.

PURE BRED CATTLE IN THE SOUTH.

Editor Southern Planter:

Mr. C. A. Williams, of Halifax county, N. C., contributes to your September issue a long letter on the subject of "keeping pure bred cattle in the south." The impressions given by a casual reading of this letter are utterly at variance with its final conclusions. The writer starts out with a jeremiad account of cattle losses from ticks and fever and closes with an invitation to the world to come and inspect his immune bulls in proof that "the pure bred cattle business can be made a success" even in a "tick district." Mr. Williams' case shows two things and only two. It shows:—

1st. He lives where ticks abound like "autumn leaves that strew the brooks in Vallambrosa."

2nd. Even in a Paradise of the parasites, nothing is needed, absolutely nothing, but *inoculation*.

Our Tar-heel friend is a royal, good fellow. We sympathize with him. He deserves success. Now that he has learned a few things about a new business he will achieve success. Having put his hand to the plow he is the last man to give up and lie down in the furrow in full prospect of a legitimate harvest. If he wants to find the money he has lost, let us assure him he must look for it exactly where he lost it. No business is exempt from difficulties. The pure bred cattle business in the south presents fewer difficulties than any other enterprise open to our people. It offers better returns upon less capital and labor. We know that in some sections the cattle tick is a great pest, but even there a little time and attention

will fix the feature of impossibility upon the problem of his mischief. In the *PLANTER* of September, 1902, read what another Mr. Williams, of N. C., said to the *Breeder's Gazette*:—

"My method of clearing the farm of ticks has been this:—the cattle were inspected almost daily during the season and no tick was allowed to mature and drop off. I prevented this by washing my cattle with a strong solution of water, kerosene oil and sulphur. If this solution is thoroughly applied it will kill the young ticks and the old ones as well. If no ticks are allowed to mature and drop in the pastures the farm will soon be free of ticks. To cure a tick fevered cow, first give a liberal drench of salts, then follow with liberal drenches of sulphur. The finest cow in our herd to-day had as bad a case of fever last summer as we ever saw." W. M. WATKINS & SONS.

Charlotte county, Va.

FOREST HOME DAIRY FARM, LOUDOUN CO., VA.

Dairy farming in the South has until within a very recent period been almost wholly neglected and even yet is confined to practically a very small number of farmers out of the gross total of those making their living off the land and yet it is a business with one of the greatest opportunities before it in this country and wherever it has become the staple branch of farming in any State or locality it has resulted in



enhancing largely the value of the land and the wealth of the community. This is evidenced by the prosperous condition of the farmers in sections of Wisconsin where cheese and butter making are staple industries, in the section around Elgin in Illinois where butter making is a great industry and in New York state where milk and cream is largely produced.

Around nearly all the large cities of the North and East there is a zone of country from which the milk supply of those cities is drawn where land is much higher in value than elsewhere in the State and where the farmers are much more prosperous. In the South this condition has not been reached to any considerable extent anywhere as the people of the cities have not yet realised the full value of milk



as a food. Recent statistics go to show that the consumption of milk and cream per capita in the cities of the South is not one-half of the consumption per capita in the North. There are few cities in the South where the consumption of milk exceeds one third of a pint per head per day and in some cities it falls to one-fourth of a pint. In some of the cities of the North it reaches one pint per head per day and the average exceeds one-half pint per head. The consumption of cream is in the like degree small in the South, indeed in many cities it is practically impossible to obtain cream. On a few farms in this State advantage has been taken of this realised want of milk and cream in the cities and dairy farming has become an established business and wherever this has been done under proper conditions financial success has followed, but we have not as yet made the business a recognized one by the establishment of milk and butter factories where the handling of the milk of a locality is centralized and conducted as a commercial undertaking. One of these farms where the business of supplying cream to Washington City is being successfully conducted is the Forest Home Farm in Loudoun county, owned and operated by H. T. Pancoast. Mr. Pancoast has equipped the farm with a fine barn with stalls for 60 cows, well lighted, ventilated and supplied with pure water and with every appliance necessary to keep the same per-

fectly clean and sweet. Silos having a capacity of 500 tons hold a large part of the feed for the stock and a 15 horse power engine and 20 horse power boiler supply power to run the machinery and steam and hot water to sterilize and keep clean and sweet all dairy utensils. The milk of the herd of 50 pure bred registered Jerseys is separated by a DeLaval Separator and the cream after being sterilized and cooled is shipped in jacketed cans to Washington City. Mr. Pancoast also buys and separates the milk of a number of his farm neighbors and thus enables them to share in the advantages of dairying. The



separated milk is fed to a herd of Berkshire hogs of the finest breeding. For these hogs and for his Jersey cattle Mr. Pancoast has secured a reputation and is building up a fine business selling the young animals all over the South. The farm is situate in a fine section of Loudoun county, one of the most fertile counties in the State, and is producing fine crops and gradually growing in fertility from the application of the manure from the large quantity of live animals kept upon it. We give views of the outside and inside of the cattle barn and of a few of the choice Jersey cows showing their fine udder development.

SOUTHWEST VIRGINIA FAIR, RADFORD, VA.

At this fair last month there was a fine exhibit of pure bred cattle from the breeders of Southwest Virginia. The classes shown were Short Horns, Herefords and Polled Angus. The number exhibited in all classes was 95.

The exhibitors of Short Horns were Major John T. Cowan, of Montgomery; Major W. W. Bentley, of Pulaski; Virginia Polytechnic Institute; C. E.

Bryant, of Grayson county; W. W. George, of Smyth county; J. G. Davis, of Grayson, and Ex-Governor Tyler, of Radford.

Major Cowan had the largest exhibit, his herd being represented by twenty-five splendid cattle, that won over \$550 in premiums. The finest of his herd was a bull between two and three years of age, "Blood Royal," recently purchased from the herd of E. K. Thomas, of Paris, Ky. This superb animal won the premium as the best Short Horn bull on the grounds. Another of his prize-winners was a beautiful snow-white yearling bull weighing 915 pounds. Still another was Gwendoline XI., a cow weighing 1,500 pounds, and the winner of many premiums.

The largest animal on the ground was Mr. Bryant's bull, "Duke of Beechwood," which weighed 2,400 pounds. "Governor Tyler," the property of Virginia Polytechnic Institute, was another Short Horn bull that took a first premium. His weight is 2,300 pounds.

The exhibitors of Herefords were S. W. Anderson, of Greenbrier county, W. Va.; Haynes L. Morgan, of Smyth county, Va.; Virginia Polytechnic Institute; C. B. Einstein, of Montgomery, and Edgar Phipps, of Grayson county. Mr. Anderson's herd was represented by twenty-four white-faced beauties, and his premiums amounted to \$600.

Among the other prize-winners were "Crimson Rambler" and "Marmaduke," owned by Haynes L. Morgan, and "Governor," owned by Major Bentley.

The Short Horn premiums amounted to \$1,000, the Herefords to \$1,000 and the Polled Angus to \$400. All of the premiums on Angus cattle were won by Virginia Polytechnic Institute.

A CONVENIENT HOG BARN.

Editor Southern Planter:

Will you kindly submit in the columns of your most valuable paper a plan of a hog house, large enough to accommodate 12 brood sows and their probable increase, say 72 pigs, keeping in view the question of sanitary conditions and the saving of the manure in the most economical way, with plank or cement floor.

A SUBSCRIBER.

Norfolk county, Va.

The following description by Prof. Soule of a hog house erected at the Tennessee Experimental Station which we take from *The Practical Farmer*, will meet this request of our subscriber. The house seems to be very conveniently arranged, but if we were building one we would increase the width of the house 8 feet and make a gangway or alley 4 feet wide on the outer side of the pens and feed slop food from this alley into troughs fixed in that side of the pen instead of having the troughs next to the middle alley. We

would let the floors of the pens slope from the centre alley to the outside and raise the troughs an inch or two above the floor. Fixed in this way all liquid splashed out of the troughs would immediately drain away from the pens out into the yards together with all the liquid voidings of the animals a gutter being laid just outside the pens in the alley to carry this away into the yards at fixed points. The pens would thus always be kept dry and clean. Dry food could be fed from the centre alley on to the dry floor of the pens. Instead of the floors of the pens being partially wood and partially ashes we would concrete the floor of the whole house before fixing the pens making provision by the insertion of posts at the proper places for the pen divisions before laying the concrete. This is the only effectual way to keep the floor of the pens level and dry. Hogs will root unless prevented by either concrete or stone and a floor rooted up is always more or less a wet one. The pens for breeding sows should have a fender rail 4x4 fixed 6 inches above the floor and 6 inches from the sides of the pen to prevent the little pigs from being crushed by being laid on. When the pigs are weaned they should live as much as possible out in the fields or hog lots and only require a shed for protection from sun and storms except in cold wintry weather when they should be kept in the pens in the house.

The following is the description above referred to:

A hog barn was erected a little over a year ago on the University farm which has proven to be very satisfactory in its arrangement, and as it was erected at a moderate cost, some facts concerning its construction will doubtless interest swine breeders who may contemplate erecting buildings at an early date. This barn, with yards and all complete, cost about \$400. It is 18 feet wide and 100 feet long, and contains a feed room at one end 16x18 feet and 16 pens 7x8 feet, with a 4-foot passage down the centre. Eight of these pens open directly into yards 8 feet wide and 50 feet long. These are intended primarily for brood sows and young pigs, in order that they may go out and enjoy all the sunshine and fresh air possible. The eight pens on the other side are intended primarily for the fattening of experimental animals. They could easily be utilized for breeding animals, if so desired, as the doors to each pen are exactly 4 feet wide and those on each side of the passage are swung from the opposite side, so when any two are open they form a complete runaway across the hall so that animals can be conveniently transferred from one side of the house to the other. The partitions between the pens are movable, so that if desirable one pen 7x16 feet can be made. The flooring extends under the troughs and covers 3 feet of the pens. The

troughs and flooring are laid on a heavy bed of coal cinders, which protects them from the damp and prevents their rapid decay. The flooring is made of 1½x12-inch oak planks, both for the stalls and for the hallway as well. The balance of the pen is kept well filled with coal cinders or bedding, according to the season of the year. The principal objection to coal cinders is that it makes white hogs look very unsightly, but for black hogs it does not make so much difference. As the hogs are fond of cinders and eat them quite freely, they answer a very useful purpose in the economy of the hog. The feeding troughs are 5 feet 9 inches long, 10½ inches wide and 10 inches high. They may be preserved almost indefinitely by lining with a single sheet of galvanized iron metal, which prevents them from becoming sour and infested with undesirable bacteria, which may later breed some form of disease. When covered with a single sheet of metal in this way they can be effectually sprayed, as can the whole building, once a week or oftener, with some disinfectant material. Gates 5 feet 9 inches long are swung over each trough. These gates are provided with a wooden slot and handle so they can be lifted up and held by the back side of the trough until the food is placed therein when the latch is again lifted and they are adjusted to a normal position. This keeps the hogs out of the trough until the food is properly distributed and saves much annoyance and loss of time and food as well.

A window is provided for each pen in the barn, and a door is placed directly underneath each window on the side opening into the yards. This gives 18 windows to the building, and as they are 2x10x3x4 inches with six panes 10x18 inches, they admit plenty of light and air. They are set in slots and can be moved to one side at will.

The sills and corner posts of the building should be constructed of 4x6s. The rafters should be 2x6s, and the studding 2x4s or 2x6s if special durability is desired; ¾x10x12 siding should be used, and ¾x2 inch battens. Matched flooring should also be used for the feed room. The building described is 8 feet high at the rear and 12 feet at the front. It has proven satisfactory in every way, providing an abundance of light and fresh air at all seasons of the year, and as it will house from 50 to 75 hogs, depending on the size, considering the first cost, it should prove a cheap and satisfactory pen.

Don't turn the cows out in the cold autumn rains and storms.

Don't scrimp the feed when the cows leave the pasture.

Don't milk with wet hands.

The Poultry Yard.

PREPARING FOR WINTER.

Now that work does not press so closely, just take a day off from farm work and give it to the hens. Have the house thoroughly cleaned, burn up all old nests and trash of every kind; repair all defective places and especially all broken windows and close up most of the ventilators. In winter very little ventilation will suffice to keep the atmosphere pure, and excess of it means roup and non-laying hens. When all repairs are completed, lime wash the house and nest boxes, mixing a little kerosene in the wash. Then put a good layer of fine gravel or sharp sand on the floor and cover with leaves or short cut straw. Cull out all old hens and surplus roosters and either sell or eat them. They will be non-producers at the time when the cost of production is the highest. Arrange to begin feeding every day a warm mash in the morning, made up of bran, corn meal and oatmeal in equal parts. Scald this and feed at once. When the morning is very cold add a pinch or two of black pepper or boil some red pepper pods in the water. See that there is always a good supply of fresh water in the troughs and in very cold weather this may with advantage be warmed just sufficient to take the chill off. Feed hard grain, wheat and corn mixed at night.

HOW LAYERS ARE MADE.

If market prices follow the natural course of events there will be good prices ruling for eggs through November and December, and every one will want to be on the ground floor. To get there the first move will be to kill off all hens over eighteen months old; then out of the remaining year-old hens, and this year's pullets, select any that are known to be very poor layers and relegate them to the culinary department. The remaining stock is then the most suitable for egg producing. If there is an over supply of pullets and yearling hens remember that the May hatched pullets, if they have had good treatment, make the best fall and winter layers. The flock can then be reduced accordingly. Properly, the flock should be reduced to its working size by the twentieth of the month, and from then on can be crowded for profitable operations.

In connection with getting the flock into working order, the results of a trial at the Central Experimental Farm last year are interesting. On October 22d, seventy birds were enclosed in comfortable quarters with limited runs, and one hundred and forty-seven were left out to run over a large range. Winter laying had not begun in either lot, and both were fed

the same rations. At the end of November the enclosed lots had laid 192 eggs, and those having a large run had laid 132; the advantage very clearly being with those that were enclosed, and thus encouraged to begin laying. By the middle of December, however, laying was general in both flocks. The average age at which the pullets began laying was five months.—*Farmer's Advocate (Canada.)*

WHY THE HENS DO NOT LAY.

The reason your hens do not lay any better is, I believe, you are feeding a too narrow ration. While many poultry raisers feed oats I do not use them at all now. The hens do not like them and will eat up everything they can get before they will eat the oats. I do not believe in compelling my fowls to eat what they do not want. Nature seems to have given an appetite to fowls for the kind of food the system calls for. The oats would be all right if we could dispose of the sharp pointed burr or husk. Corn and wheat are all right, especially the wheat. So are the green feeds; but if your mash is composed of nothing but bran it is not sufficient. Try a chop of fine ground oats, corn and wheat, with one and one-half pints of good meat meal to every three gallons of mixed soft feed, and above all give plenty of good, fresh water. I cannot agree with Mr. Clipp in regard to oyster shells. The laying hens are fairly ravenous for shell and if they are not constantly supplied will eat it like corn when they do get the chance. I find that if my yarded fowls do not have shell they will eat their eggs. A neighbor asked me what she could do to keep her hens from eating eggs, as they would eat every egg they could find. I told her to try oyster shells, and they quit at once. That woman will not do without shell at all. Before we went into the poultry business and made a study of it we would lose a large number of fowls with various diseases, mostly cholera, but since we use oyster shell on the inside and louse powder on the outside of the fowls we have not had a single case of cholera.—*National Stockman.*

POULTRY SHOW IN RICHMOND, VA.

The Virginia Poultry and Pet Stock Association will have its annual exhibition in the Masonic Temple, Richmond, 23d to 28th November. The premium list is a heavy one, and the judges experts and reliable men. Dogs will also be a prominent feature at the show, under the auspices of the Virginia Kennel Club. See advertisement of the show in this issue. We would like to see a great success achieved. The poultry interest is now a great one in the South.

The Horse.

NOTES.

Richmond's third annual Horse Show was a grand success in point of attendance, the character of exhibits and financially, and interest never seemed to flag from the rise of the curtain on Tuesday evening, October 13th until the close on the following Saturday. The management of the Association made up of President J. T. Anderson; Vice-President Harry C. Beattie, Secretary W. O. Warthen, Manager C. W. Smith and others, were well pleased over the result and are already maturing plans for a show to be held on even a grander scale in 1904. And all of this in spite of the financial depression which has strongly affected Richmond. Well known stables from prominent northern centres were here in force with prize winners that have held their own at the big shows all down the line, but at that, Virginia horses made a grand display and their work on the tan bark brought forth unbounded applause. This, of course, applies mostly to hunters and jumpers, because harness horses like those exhibited by Dr. W. E. Woodend, Mrs. John Gerken, Mrs. James B. M. Grosvenor, G. Trowbridge Hollister, Mrs. A. E. Deiterich and others were of a very high class and able to compete successfully in any company, but even then home bred products were in evidence. The four-in-hand driving of the noted whips, Charles Fownes with Dr. Woodend's horses, and Jack Donnelly with those of Mr. Trowbridge and Mrs. Hollister was a revelation to Richmond audiences. Sidney J. Holloway, with his sister, Miss Maria Holloway, of Scarsdale, N. Y., brought down the well known hunters and jumpers, Chappie and Freelance and their horsemanship was simply grand. Howard Willet's, of White Plains, had the world's champion high jumper Heatherbloom, Toronto and several others in charge of Richard Donnelly. Heatherbloom was booked to jump against the record, but was drawn on account of the death of Mr. Willet's son and Donnelly sent his own horse Rifle over the jumps on Saturday night at seven feet, two inches. The display of Virginia bred hunters and jumpers was great, among them being Amaret, Hornpipe, Buck and others that have won at the big shows. Among the best known Virginia exhibitors were Chas. H. Hurkamp, Harry C. Beattie, T. L. Evans, J. B. McComb, Morris & Joslin, Mr. and Mrs. Blair Johnson, L. D. Passano Jr., R. M. Taylor, C. W. Smith, J. Stewart Bryan, Miss Louise Selden, R. C. Selden and others.



The largest winners at the Richmond Horse Show were Dr. and Mrs. W. E. Woodend, of New York, who are credited with \$1,750, but they had the large

stable here, numbering some 16 harness and saddle horses, while Mrs. James B. M. Grosvenor followed with \$750, G. Trowbridge Hollister, with \$725, Mrs. John Gerken with \$520, Thomas Deford with \$300, Charles Pfizer with \$250, R. M. Taylor with \$175 and Mrs. A. E. Deiterich with \$250. These were from a distance but Virginia horses did well and their owners stand credited as follows: E. A. Saunders, \$325, Garber & Garber, \$175, John Kerr Branch, \$200, W. E. Boeing, \$150, Mr. and Mrs. J. Stewart Bryan, \$247.50, T. L. Evans, \$183, L. D. Passano, Jr., \$167, D. B. Tennant, \$112.50, McComb & Snyder, \$150, Hon. Henry Fairfax, \$100, John H. Selden, \$100, B. S. Forbes, \$100, Mrs. Blair Johnston, \$150. In this list the most noteworthy winners are Mrs. Blair Johnston with Robin Adair and Lord Chesterfield, both of whom were in the saddle classes, and Charles H. Hurkamp, who only had three horses and was here three days. Amaret, Hornpipe and Alan-a-dale made up the Hurkamp stable. Three blues and a couple of red ribbons went to Amaret, one blue to Hornpipe and Alan-a-dale, a green horse, followed with one yellow ribbon.



Through an advertisement in the *PLANTER*, which in passing I may add is excelled as an advertising medium by no journal in the land treating on similar subjects, to which replies were received from widely different sections, I have sold to W. C. McMackin, superintendent of the speed department of the North Carolina Agricultural Society, Raleigh, the bay stallion Whalebone, 7872, by Abdallah Wilkes, son of George Wilkes; dam Molly O., by Abdallah, 15, the sire of Goldsmith Maid 2:14; the famous sires Almont, Belmont, etc. Mr. McMackin will drive Whalebone on the road and use him in the stud. The son of Abdallah Wilkes has size, finish and good looks, and his get take after him. Five of his daughters were bred in the spring to Pilot Medium, Jr., 2:09 3-4, who holds a world's record to cart; and to D. C. Lester, sheriff of Polk county, Hatfield, Arkansas, the brown colt Featherbone, 38363, foaled May 27, 1902, by Whalebone, dam Alcyrene, 2:27 3-4, trial 2:19 1-4, by the famous dead Alcyrene, 2:27. This colt is well formed, handsome and of nice size, while his action and gait betoken both speed and race horse quality. Featherbone was purchased by Mr. Lester to place in the stud. His dam, Alcyrene, I sold last spring to M. W. Savage, owner of Dan Patch, 1:59; Directum, 2:05 1-4, etc., and she is now a member of the great band of brood mares in his stud. Alcyrene was bred to Directum.



That ever popular and meritorious organization,

the Deep Run Hunt Club is evidently taking on new life, as a meeting was recently held at the Westmoreland Club and matters of importance discussed, while officers for the ensuing year were elected. The Hunt Club has played an important part here since its organization more than a decade since, not only socially, but in stimulating an interest in well bred horses and creating a demand for hunters and jumpers, likewise in the development of such, and drawing the attention of the outside world to Virginia's splendid resources in that direction. It is likely that the present headquarters of the club may be changed at an early date and other sports, including shooting and golf, added. A number of members are favorable to having a country club house out on the Cary street road and the impression prevails that the Hermitage Club and Hunt Club are likely to unite in securing a home. The officers elected: President, Cotesworth C. Pinkney; Vice-President, W. Otto Nolting; Secretary and Treasurer, Major P. A. Wellford; M. F. H., Mr. Harry C. Beattie; Board of Directors, Messrs. Joseph Willard, J. Stewart Bryan, Harry C. Beattie, J. T. Anderson, Frank W. Christian, Carter W. Branch, H. S. Hawes, Barton H. Grundy and Dr. J. A. White.

At the sale of imported thoroughbred brood mares, yearlings and weanlings consigned by Douglas H. Grand, of Kent, England, and sold under the management of the American Blood Stock Agency at the American Horse Exchange, New York, October 2nd, Robert Neville, Welbourne, Virginia, was among the purchasers and secured the following: Cashla, chestnut mare, 11 by Bend Or, dam Ashgrove, by Albert Victor, \$500; chestnut filly, weanling, by Queen's Birthday, dam Cashla, \$50; bay colt, weanling, by Freak, dam Sunspot, by Prism, \$100; chestnut filly, weanling, by Carlton Grange, dam Claire, by Lowlander, \$75; bay colt, weanling, by Missel Thrush, dam Armoury, by Mouron, bay filly, weanling, by Earwig, dam Ravello, by Sir Hugo, \$75; chestnut colt, yearling, by El Diablo, dam Australian Gold, by Bendigo, \$175.

Capt. Edward R. Baird, breeder of thoroughbred harness horses, hunters and jumpers at Epping Forest Stud Farm, Occupacia, Va., writes me that he is well pleased with the condition of his stock, all of them on the farm. The thoroughbred department includes the brood mares imp. Pleasure, a chestnut, foaled 1889, by Fortissimo, dam My Beauty, by II. Gladiatore, bred to Judge Morrow, and Niofe, by Eolus, dam Nita, by imp. Billet; bred to Chiswick, Lotus Lilly, bay filly, yearling, by imp. Water Level, dam Evangeline Cisneros, by Eon; Iron Prince, chestnut colt, yearling, by Chiswick, dam imp. Pleasure, and Kepstone, black colt, weanling, by Iron

Crown, dam imp. Pleasure. Capt. Baird also has some good looking half bred from standard bred mares, among them a couple of handsome geldings 4 and 5, which are being driven to pole.

Mr. Chamblin's Lucky Clover, bay gelding, 5, by Flatlands, dam Lucky Clover, by Bersan, certainly won the title of our champion steeplechaser by winning the great \$10,000 steeplechase at Morris Park, New York, on October 3, with 167 pounds on his back and defeating the best horses in training, among others the well known Self Protection, a winner of this event last season and who was once regraded as a likely candidate for English Grand National honors. Land of Clover was bred by J. H. McGavock, Fort Chiswell Stud, Max Meadows, Va., and sired by Flatlands, the son of imp. Woodlands and Maggie B. B., dam of Iroquois. Flatlands heads the Fort Chiswell Stud and has sired among other winners this season Callant, Miss Liza and Old Mike, all of whom were bred at Fort Chiswell. Callant is owned by C. D. Hutzler, of this city, for whom he has won some good races at the Chicago tracks.

At famous Belle Meade Stud's dispersal sale, which took place recently at New York, the former noted race mare Ma Belle, a product of the Ellerslie Stud, by imp. Charaxus, dam Ada Belle, by Molus, was purchased by R. C. Brien for \$1,050. Ma Belle is 15 years old and has been a matron at Belle Meade for some years past. The Belle Meade horses were sold in New York and the highest price obtained was \$15,000 for The Commoner, chestnut horse, 11, by Hanover, dam Margerine, by Algerina, the Virginia bred son of Abdel Kader and famous Nina, by Boston.

The Tranter-Kenney Company, of Lexington, Ky., offered a prize of \$25 for a name best suited to the yearling colt by Jay McGregor, dam Millionaire, by Norwood. Something like one thousand names were submitted from many different sections, but the prize went to J. H. Wingate, City Engineer, of Roanoke, Va., who chose the name Plutocrat and got the prize.

President J. T. Anderson, of the Richmond Horse Show Association, is authority for the statement that the profits of the recent exhibit here were \$10,000. The total expenses were \$20,000 and the receipts from all sources reached \$30,000, thus leaving quite a nice balance on which to do business next year.

Dan Patch has again beaten the record, having gone the distance at Memphis on the 22d October in 1.56 $\frac{1}{4}$, and this without a wind shield in front of him. Records are now being smashed so rapidly that we cannot keep pace with them.

BROAD ROCK.

Miscellaneous.

COURT DAY IN VIRGINIA.

This old institution of the State is now almost a thing of the past. In a few months, under the provisions of the new Constitution, the county courts will be abolished and circuit courts held at longer intervals will take their place. We rejoice at this change. It is one which we had long advocated. There was no reason whatever why the taxes of the people should be expended in maintaining 100 county court judges with the necessary staffs, when a much less number could easily discharge the duties. Economy and efficiency both demanded the change. Whilst, however, we rejoice in the abolishing of the courts, we do not wish to see the gathering of the people together on the court days abolished. In order that this may not follow, we suggest that the county authorities and the people should, before the new Constitutional provisions come into operation, meet on a court day and make the necessary arrangements for continuing the court days as monthly markets at which the citizens of the counties can meet and dispose of their live and dead farm products. In England every county town and most other towns in the counties, have a certain day in each week which is known as "market day." These are old established institutions, many of them dating back hundreds of years. On these particular days, and also on two or three other days in the year, known as "fair days," the farmers bring in their produce of all kinds and dealers and buyers from all over the county and from adjoining counties and cities attend to buy the same. In this way a large business is done, every one knowing that buyers and sellers will be there for products of every kind. There is no reason whatever why this same system of markets and fairs cannot be established here, and usefully take the place of the old "court day," affording an opportunity much needed, of a place to buy and sell, and also for the meeting of the people to discuss business and local and national questions. The County Board of Supervisors and other county authorities should arrange their meetings so as to be held also on these market days, and thus aid in establishing the market by bringing the people together. We commend this suggestion to the attention of the authorities and people of each county, and shall be glad to hear the views of the people on the subject. In the words of the good old Book, we would say: "Forsake not the assembling of yourselves together." There is too much

isolation amongst farmers already. Get together and correct this.

ICE HOUSE BUILDING.

We have several enquiries as to the building of an ice house, and as to whether we advise a house above ground or a pit in the ground as a storage place for ice. In reply to these, we will say that we strongly prefer a house above ground to a pit for many reasons. In the first place, it is easier built than a pit is dug. In the next place, it is more economical and saving of ice than a pit, and it is also easier to fill and to empty. A house for keeping ice should be built on high, dry ground, with easy means of good drainage, for upon perfect drainage of water from the ice, and good ventilation over the top of it, depends largely the economical storage of the article. The other conditions requisite for success in storing is such a house as will effectually exclude the air from the ice and maintain an equable low temperature. The best ice house, is practically a house within a house. The space between the inner lining and the outer house should be from 12 to 15 inches, and this space should be packed tight with sawdust or some other non-conducting substance, but sawdust is usually the cheapest and most easily obtained. This double wall feature should be extended to the roof, which should be also double and packed like the side walls. Double doors should also be provided, and the intervening space be packed with bags of sawdust when the house is closed. The floor should be raised a few inches above the ground level, say 6 inches, and should be laid with battens an inch apart to permit of drainage from the melting ice. The water thus draining from the ice should be drained away from the house by a pipe drain, which should have a bend in it, which will hold water the full circumference of the pipe, so as to completely exclude air from the ice house. In the gables of the roof there should be fixed two ventilators, which will carry off all heated air from the top of the ice. As the ice is filled in it should be chunked with ice between the blocks and should be covered with 12 or 15 inches of sawdust, over which should be spread a thick covering of marsh hay or fine cut straw. Ice weighs about 50 pounds to the cubic foot, so that it is easy to calculate what size of house is necessary when the daily consumption is known. A house 10x10x10 will hold 1,000 cubic feet of ice,

or about 25 tons, this after allowing for wasting by melting will provide 200 pounds per day for 150 days, an ample supply for a large household and for a dairy. If the ice house can be built on the north side of other buildings overshadowing it or under a large tree it will be desirable to build there, as these will protect it from the rays of the hot summer sun, and thus save ice.

KEEPING BEES.

Editor Southern Planter:

Every progressive farmer should have a small apiary. Besides the profit in bees, there is a satisfaction in caring for them and studying them scientifically. I say "scientifically," for I should not advise any one to keep bees in any other way. Books and periodicals on bee-keeping, and standard bee materials, are so accessible and cheap in these days that obsolete and makeshift methods are out of the question.

One or two colonies are enough to start with, for it will take some time to become expert enough to handle a great number with success. Any of the first class modern hives will do. The simplest are generally the best. Avoid all fancy, trick hives, and don't make the mistake that I did in getting more than one kind, whose parts will not exchange. Of course, you should have the frame hive, which you can open at any time for the purpose of ascertaining the condition of your bees. There will be a brood chamber below occupied by the bees as a permanent house. Above this is a smaller story, called the super, in which they will deposit all surplus honey which falls to the share of the master. In the lower story the brood frames extend the whole length of the hive, while the upper story is filled with small section frames about large enough to hold a pound each of comb honey.

Modern beekeepers have a great many appliances, some of which you will find very necessary, while others are not. A smoker is very essential. You also want a bee veil of fine material as a protection against stings. A pair of cheap buckskin gloves is not amiss, though you will soon learn to do without them, as I did. If you deal gently with your bees and smoke them properly, there is little danger of stings.

The bee yard should be near the house, where swarms may be seen as soon as they come out. Otherwise they will often get away without your knowing it. The bees should be fenced off in a little inclosure

to themselves. This is to ward off stock and protect the bees from disturbance. It is well to have some shade for each hive, though either very much shade or very little is not best. The stands should face the south, and, if in the edge of an orchard, so much the better. Bees and fruit go well together. The bees carry pollen from bloom to bloom, and make them fertile, while the blooms in turn afford honey for the bees.

While it is not necessary to be working with a small number of bees continuously, they should never be out of mind. They require some attention in all seasons. In the early spring there will be weak colonies, which will require feeding. Late in the fall, if the lower story is not sufficiently packed with honey for winter, it is again necessary to feed, and thus replenish the stores. All through the warm season the combs of the brood chamber should be examined every three or four weeks to see if they contain eggs or brood. If they do not, the colony is probably queenless. In that case a new queen must be introduced, or else you should put in frames of combs containing eggs from other hives. From these the bees will raise a new queen. If this is not done, the colony will soon die out from want of new bees, for bees live but a short time—only a few months at longest. In getting my experience, I let two colonies die, and I now feel sure that they had become queenless.

About fifty years ago the Rev. L. L. Langstrath invented the modern hive, with movable frames. He may be called the greatest of beekeepers, and his motto was: "Keep your colonies strong." If this is done, you need not have much fear of the result. Moth worms cannot hurt a strong colony. They only take possession as the colony weakens down and dies out.

The main honey flow comes early in the season for most parts of the country. Orchards and white clover usually furnish the principal crops. Sourwood and chestnut blooms are valuable pasture. The poplar, or tulip tree is a rich honey producer in the South. Cotton, cow peas and buckwheat are perhaps the best crops on the farm to produce honey as a by product. It will scarcely pay to sow any crop as a honey producer alone. Many weeds afford good bee pasture. Spanish needles, boneset, stick weeds (asters) and golden rod are our main dependence late in the summer and fall.

Bee pasture is not equally good in all parts of the country. The most honey is produced in the buckwheat districts of New York and the alfalfa fields of

the Rocky Mountain region. The wild sage of California is also rich in honey. Apiaries in these sections of the country are very profitable. The product of a single season often reaches many tons, and brings in several thousand dollars to a single producer. Texas is perhaps the best honey State in the South.

T. C. K.

Knox Co., Tenn.

TOBACCO MARKETS.

Editor Southern Planter:

Permit me, through your columns, to appeal on behalf of Virginia tobacco growers, to the Legislature to enact some statute to regulate the sale of leaf tobacco. Some years ago when all warehouses were bonded, we only had to pay 3 per cent., and we had a State officer to see after citizen's or producer's interests. Warehouse men went before the Legislature and represented that this State officer was a useless burden on the good people, and if done away with they would sell tobacco at a less cost. The Legislature (as they usually do in such cases) heeded them, and immediately there sprang up in every little town tobacco warehouses, and they have gradually increased their charges until now they charge about what they choose. This seems to be the schedule: 10 cents per 100 for weighing, 25 cents per pile auction fee (they boast they sell 6 piles per minute, \$1.55 per minute, made by a man they hire at \$10 per month sometimes, as I understand), and after charging as above, they charge $2\frac{1}{2}$ per cent. on gross sales for handing over the money. Taking the entire crop, I suppose this amounts to about 25 per cent. of what it brings. Of course, when the tobacco is good and sold in large lots this percentage is reduced, but as the bulk of the crop is sold in small lots and comes in the low grades, the charge is large. Tobacco is different from any other product, as all we can do with it is to sell it, and there are so many people dependent on that crop for a livelihood, it should be legislated about as milling is. If I send a load of grain to market, all I am charged by the commission merchant is 3 per cent., for a crate of eggs, coop of chickens, or other country produce I am only charged 5 per cent., and it is certainly twice as much trouble to handle these small articles as tobacco. This legislation would help both the merchant and manufacturer, as the farmer's purchases are generally only limited by his purse. Virginians pay warehouse men about \$2,000,000 annually for selling tobacco. A warehouse with a good custom is a veritable gold mine. Three per cent. is all they ought to be allowed to charge, and they can make good money at that.

Mecklenburg Co., Va. THOS. H. ORGAIN.

We doubt much whether such legislation as is sug-

gested would be desirable. We hold strongly to the opinion that the less legislation there is interfering with the free choice of a man as to his manner of conducting his business or himself, so long as he does not injure his neighbor by his conduct, the better it is for all. With a multiplicity of warehouses such as now exist free competition should give better results than limiting the opportunities for selling. Why should not the tobacco growers organize themselves into an association like the Sweet Potato growers of the Eastern Shore have done and then sell their own produce in their own warehouses on their own terms. If there be the profit in conducting warehouses, which our correspondent asserts there should be no difficulty in doing this. Better regulate terms of business by organization than by legislation. It is easier done, and they can then be altered or abolished whenever desired by those who are primarily affected.—ED.

FARMING AS A BUSINESS.

(The following article was prepared and read before a recent Farmers' Institute at the Agricultural College, Miss., by Mr. W. B. Mercier, of Centreville, Miss. Mr. Mercier is an old time subscriber to and reader of THE SOUTHERN PLANTER, and a successful farmer and business man.)

Mr. President and Gentlemen:

The most hopeful sign of the times, from an agricultural standpoint, is the general recognition by thinking men of the importance and necessity of brains in our farming classes. The old theory that any fool can farm, and when any one fails in another calling he may take up farming and succeed, is now regarded as an insult to the farmers. Farming, as a business, was instituted by the Creator Himself. It has been recognized as an indispensable and important occupation by the greatest men. But it is only recently that farming has begun to take precedence over the professions. We, as farmers, should never be satisfied with anything short of the leading place for it; for upon its successful pursuit all other callings must of necessity depend for their very existence. Farming as a business is fast attracting the attention of our greatest thinkers and financiers, and we rejoice to see numbers of our brainiest young men remaining upon the farm and putting forth all their energies to build up this long neglected vocation. The successful farmer is now looked upon as the shrewdest business man of his neighborhood. This is just to his ability, as no other occupation requires so broad a range of strictly business forethought and mental work in the general arrangement of its plans. Nothing else offers such a great opportunity for the development of a truly great business career.

We believe there is no other place on earth to be compared with the farm in our beautiful South-land, and especially in the State of Mississippi for opportunities and inducements to any thorough-going business-seeking young men. Farmers, as a class, are fast commanding the respect of the world, and are rapidly taking their places along with the most advanced men of our time, intellectually, socially and financially. Therefore we are called upon to put forth every effort and to assume the lead in all the affairs of State which the natural position of our business requires of us.

To insure the greater success for our young men, they should have a thorough course in an agricultural college, where the theory as well as practice of modern scientific farming may be learned. In the case of older men, whose circumstances and environments preclude the possibility of such a course of study, we recommend the careful reading of several good farm papers along with the various Experiment Station bulletins from our own State institution and from the United States Department of Agriculture, at Washington. By all means they should attend the farmers' meetings, foremost, and, we think, the most successful of which are Farmers' Institutes, which have recently become so popular throughout the country. These institutes are now held at various points through the State, so there is scarcely a farmer who cannot easily attend one of them. No one can attend a session without coming away with some new and useful idea about some part of his farm work. We would, however, warn the college graduate of the dangers of theoretical farming without the ability to substitute at any and all times the more staple and reliable art of practical work. We have found from actual experience that many beautiful theories in farming will not pan out in practice, and unless a man has common sense enough to choose and apply practical methods in conjunction with theories, in all farm work he had best follow something else.

The application of strictly business principles to all lines of farm work has been, and still is, the crying need of the day. We can no longer succeed by the old slipshod methods, any more than a doctor or lawyer can succeed by applying the methods of his forefathers. Plans should be laid out for a series of years, often as much as ten years ahead. We must, of course, be governed by circumstances in the ultimate carrying out of these plans. Constant changes and revisions must be made to meet the ever-changing demands of the hour. No iron-clad rules can be laid down for any branch of work on the farm, no more than any one medicine can be prescribed for all diseases, for no two seasons are alike, consequently what would be good one year in working a crop could not be done at all the next. The business farmer must know when and how to prepare and cultivate his

soils. Use only such fertilizers, and in such quantities, as are best suited to each crop. Grow the crops that require the least expenditure of labor and money for the largest profits. Sell what one makes at the highest price and buy only the best at the lowest prices possible. Raise only the best stock and these from good specimens of the chosen breed. Save everything grown that can be utilized as feed, and return the same to the land from the barnyard and stables.

Preserve the fertility of the soil regardless of other things, for upon this will depend final success or failure, as no man can prosper on the proceeds of a constantly decreasing capital. Our farm lands are our only capital. If we study our business, adopt the best known methods, grow only such crops and stock as will give the greatest returns for the money and labor invested, nothing will keep us from attaining the highest ideal in farm life. The mere fact that so many make a reasonable success at farming in the old way is conclusive proof that no other occupation under the sun is so sure of handsome returns when followed upon purely business principles. Sum up the drains and small losses on the farm under the ordinary management, and we can readily see that no other business could sustain half the loss and survive.

Another serious problem facing the agricultural interest of our State and country is that of labor. It grows scarcer and less reliable each year. This can be partially met, and perhaps successfully so, by substituting crops that can be grown and harvested by the use of improved machinery, and turning out more of our thin lands to pastures for growing more stock. The farmer who first foresees and adopts this plan will live to rejoice in his good judgment. There can be no denying the fact that the peaceable and successful employment of the negro as our only farm help will soon be a thing of the past unless some more stringent laws for his management and control can be devised.

Diversified crops must be grown to insure permanent prosperity. The man who has something to sell at all seasons of the year can always be pointed out in a community as the man who is prospering. He soon learns when and what to raise for sale. He buys the best from his neighbor, who, through ignorance of the market or carelessness in his management, is glad to sell at any price in order to eke out a mere existence. The well-informed man very frequently reaps his greatest profits from stock and other produce bought from this thriftless neighbor at low prices, and sold at a profit when such produce is in demand at the highest market prices. Every wide-awake business farmer keeps books, and can at a moment's notice tell what crop has paid a profit and what has not. Strict accounts are kept of every business transaction during the year, so when the season for balancing ac-

counts comes up he can see where he stands financially as compared with the year before. No farm can be run properly without a system of good bookkeeping, and each day's transactions, as well as the work, kind of weather, and anything of note may be recorded. We have found nothing in which this can be done so concisely, yet correctly, fully and conveniently, as what is sold as the Farmer's account book and farm record, published by E. A. Böhne & Sons, Hansen, Neb. This book is handsomely bound, containing a record for three years. It is ruled off and arranged to contain any and everything which may need recording on the farm, from a map of farm to the smallest itemized accounts with laborers or tenants. At the end of each year there is a blank for balancing up the year's account, and if your book has been properly kept it is only a few hours' work to give a detailed statement of the entire year, from which can be easily drawn conclusions as to what line of farming is most profitable to follow.

While we have heretofore, as a State, adhered to the all cotton plan, except in a few communities, it is gratifying to note the growing tendency to raise other crops enough for home consumption at least. We note with pleasure that where the change from all cotton to diversified crops has been greatest there is the more general indication of thrift and prosperity among the people. We are pre-eminently a cotton growing State, and are likely to continue as such for years to come, but it is apparent to any observing farmer that we can raise profitably all our food stuff and plantation supplies, and at the same time grow just as many bales of cotton as we now do on half the land now devoted to growing it. We admit that the high price of cotton now has a tendency to make us loose our heads along this line, but if we stop to consider the relative high prices of other farm products we can easily see that many other things can be grown at a much greater net profit. Take, for instance, the price of meats for the past two or three years, and consider how cheaply hogs and cattle can be raised with the foods to finish them for the market, and we will have some idea of the bank accounts we might have had if we could only have been shrewd enough and had nerve enough to break from our old idols and have taken up the new.

We have a neighbor who last year raised \$1,000 worth rice on 16 acres of land with about 3 hours labor each day from the time of planting until ready for harvesting. The preparation of land and harvesting was done with improved machinery at the minimum cost. After terracing his land he had only to turn a creek into his ditches to irrigate the whole plat. The keeping up of these terraces and changing water gates was all the labor needed in growing the crop. This year his prospects are finer than last, with the additional satisfaction that the cost of labor

has been still further reduced, and the original area enlarged. The same party raises hogs for market at a cost that would astonish an old cotton veteran. You had as well talk to this man about flying as to try to induce him to grow cotton. He is sharp enough to see how cheaply he can grow these crops, and he has easily figured what it cost to grow cotton. By growing these crops he finds time to improve and beautify his farm and home, and he is not rushed to death 12 months of the year like every cotton farmer.

All of us are not situated to grow these special crops as this man, but many of us are, and it seems like folly not to raise them when we are assured that we are taking little risk as compared with cotton. We must not fail to call attention to the bearing organizations among farming communities have upon their business standing. This is a day of organization and counter organization. No business or profession is without them, and when every one adopts a thing there must be some good derived from it. The farmer cries out against organizations in other enterprises, but fails to realize that it is possible for him to organize into a body that could defy the world. Since we have trusts and combines with us, and they are here to stay, would it not be a sensible proposition for us to stop complaining and play them at their own games? If we will combine properly, it is in our power to regulate freight rates, taxation, buy and sell our products at wholesale, thereby cutting out the questionable profits of middlemen and commission men. We could fix a uniform and reasonable price on our farm products, and in hundreds of other ways take our business affairs into our own hands. This would stop every other vocation from fleecing us, and we would cease to hear the cry of oppression from the agricultural part of our land. We read of where combines among farmers in the West have resulted in great benefit where they have handled all their business themselves. In some instances they have actually run the trust out of business. This only serves to illustrate the power we could exert by combined effort. But as long as we are cursed by the credit system in vogue throughout the South we need not hope for financial freedom. This evil can be eradicated by us, and until we arouse ourselves along this line and begin to examine into the business principles which underlie our farming interest we need not expect the universal prosperity and goodwill which might reign supreme among us.

It is a generally accepted theory that we have not sufficient capital at command to develop our agricultural interests to the highest degree. All of us realize how handicapped any farmer is without sufficient money at hand to carry out his best plans and ideas to a successful business end. We must demonstrate to those who have money to invest that there is no business that returns such sure profits on the investment,

when properly managed, as farming. When we succeed in establishing this fact to the satisfaction of the moneyed men of the country we will have no further trouble in finding plenty of money at cheap rates of interest to be loaned on good farm security. When we consider that often our crops are cut off 50 per cent. in one year, and that frequently we suffer losses in stock and property that would bankrupt any other line of business, there should not be any great difficulty in proving to the capitalists of our country that no security is so good or certain for a term of years as a good farm with a wide-awake, business-like farmer in control.

W. B. MERCIER.

Centreville, Miss.

A CHANCE FOR AMERICAN FARMERS—MONEY IN GOATSKINS.

A new industry is offering itself to the farmers of the United States. The fact that twenty-five million dollars' worth of goatskins are now annually imported into the United States, and that her enterprising manufacturers are obliged to send halfway around the world for a large share of them, suggests that the farmers of the country have a great opportunity to put a large share of this sum into their pockets.

A statement just presented by the Department of Commerce and Labor shows that importations of goatskins into the United States are now running at the rate of twenty-five million dollars per annum, and that a large share of these are brought from India, China, Arabia and southeastern Russia. The increasing popularity of certain classes of kid leather for footwear, as well as gloves, has increased very greatly the demand for goatskins in the United States within recent years. In 1885 the value of goatskins imported was about four million dollars; by 1890 it had grown to nine millions, by 1898 it was fifteen millions, in 1900 it was twenty-two millions, and in 1903 twenty-five millions, in round numbers.

Of this large sum of money sent out of the country to purchase goatskins, seven million dollars went to India, nearly two millions to China, two and one-half millions to France, two and one-half millions to Russia, one and one-half millions to Brazil, one million to Argentina, and another million to Arabia. From India, which took less than five million dollars' worth of merchandise of all kinds from the United States last year, and has increased her purchases from us less than two million dollars in a decade, we have increased our importations of goatskins alone from two million dollars in 1892 to seven and one-half million dollars in 1902. From Brazil, which has reduced her imports from the United States from fifteen million dollars in 1895 to ten million dollars in 1903, our purchases of goatskins last year were one and one-half million dollars. France, Russia, the United

Kingdom, Turkey in Europe and Turkey in Asia, Arabia, China, southern Africa, Argentina and Mexico also contribute liberally to the supply of goatskins to make up the twenty-five million dollars' worth of this product brought into the United States annually.

The farmers of the United States are apparently making no effort to reap any part of this golden harvest for themselves. The census of 1900 showed the total number goats in the United States to be less than two millions, and when it is understood that the skins of probably twenty million goats were required to make the twenty-five million dollars' worth imported last year, it would be seen that the supply from the United States could have formed but a small share of the total consumption. Yet the fact that a large share of our supply of this important import comes from India, China, France and Mexico suggests that there are large areas in the United States which might produce goats successfully, and in sufficiently large numbers to supply the entire home demand.

GOOD ROADS.

WHY FARMERS SHOULD FAVOR GOVERNMENT CO-OPERATION.

By Col. J. B. Killebrew.

The rapidity with which the sentiment in favor of national aid to the common roads of the country has spread, and the eagerness with which the proposition is welcomed since the introduction of the Brownlow bill in Congress have not only been highly gratifying to the friends of the measure, but surprising and astonishing to its opponents. The truth is, the great body of the farmers of the land are slow in demanding what they are justly entitled to. Had the same necessity as the want of good roads among farmers existed in relation to the manufacturing, mining or commercial interests of the country, such a necessity would have long since been recognized and met by adequate appropriations from Congress. The tillers of the soil do not work for their own advancement. By the census of 1900 the whole number of people above the age of ten years engaged in gainful occupations in the United States was 29,074,117. Of this number 10,381,765 were engaged in agricultural pursuits. No other specified occupation employs so many. The manufacturing and mechanical pursuits employ 7,085,992 persons; trade and transportation, 4,766,964, and professional service, 1,258,739. And yet, the farmers of the country, that contribute more to its permanent prosperity than all other classes combined, have the smallest amount of consideration in the matter of Congressional appropriations. In all the history of the past legislation of the country

but few efforts have been made to equalize the benefits of Congressional appropriations. Until the rural mail routes were established a citizen living in the country rarely received direct benefits from the money expended by the general government, except that for the agricultural department.

The commerce of the country felt the exuberance of fresh and lusty life and vigor from the improvement of the rivers and harbors, but this exuberance would have been vastly increased had half the money appropriated for rivers and harbors been applied to aid in the improvement and maintenance of the public roads, the very foundation of commerce.

It must not be imagined that anyone proposes that the government shall enter upon the work of building public highways without the co-operation of the State, county or other political sub-division. The policy of the government should be to help these communities that help themselves; to stimulate action and enterprise rather than to repress it by appropriating money to those communities that do nothing for themselves.

A CORN EXHIBIT.

At a recent meeting of the Virginia St. Louis Exposition Committee it was decided to make a corn exhibit of not less than one thousand bushels in the ear.

As an aid in locating fine corn crops and to stimulate interest in this exhibit, the commission will give \$20 as a prize for the best 100 ears sent in by any competitor with the understanding that all competing exhibits are to be donated to the corn exhibits.

Competing corn should be shipped in tight boxes or barrels to George E. Murrell, superintendent, No. 14 Governor street, Richmond, Va., C. O. D., by freight, on or before December 1st of this year.

Corn exhibits of from one bushel of ears to a flour barrel full of a kind, and of as many varieties as possible are desired. And as Virginia has a fine crop, it is hoped that corn growers, whether competing or not, will send in shipments which in each case must bear the grower's name, and thus by united effort show what Virginia can do in this line.

VIRGINIA TOBACCO GROWERS TRYING TO ORGANIZE.

A large number of tobacco growers and business men met recently at Boydton, in the court-house, and organized a tobacco growers' protective association. Two organizers were appointed who will organize associations in every section of the county and endeavor to induce 80 per cent. of the tobacco growers to pledge themselves to abide by the rules and regulations of the officers of the association.

One of the first things that will be attempted will be to reduce the acreage cultivated in tobacco. This will have to be done by a general and uniform system, so that no more tobacco will be raised than is required each year. It is intended to hold a state meeting in Danville some time in November, to be attended by delegates from all the tobacco growing counties in Virginia, when an effort will be made to devise some uniform plan of work throughout the state.—*American Agriculturist*.

Grass for Name.

I enclose a sprig of grass like I sent some time ago when you advised me to send you a seed pod and bloom. I could not send it sooner as it is only just blooming out now. Please state in your next issue what it is and if it is of any value. J. G. Cox.

Carroll county, Va.

The grass is one of the "Nimble-wills" (*Muhlenbergia Mexicana*). It is a native perennial of the Eastern United States. It is a very late grass not especially relished by stock and of little economic value.—*Ed.*

How to Get Rid of Fleas.

Subscriber, Wythe county, Va., asks how to get rid of fleas. As the domestic animals, especially dogs and cats, furnish the principal supply to the house, it is necessary to keep such animals clean of fleas, which can be done by applying oil of pennyroyal liberally in their fur. Stand the animal to be treated on a large sheet of paper so as to catch the fleas as they fall off. Then roll the paper up closely and burn immediately. Work rapidly, as the fleas soon revive after falling off the animal.

FREDERICK HUTCHISON, M. D.

Loudoun Co., Va.

THE EGG LAYING CONTEST.

Australian hens are still being beaten on their own ground by the three pens of American fowls which Miller Purvis, of Chicago, caused to be entered in the egg laying competition at the Hawkesbury Agricultural College, near Sydney. Seventy pens of six hens each are competing. It is learned that the invading flocks hold first, third and seventh places in the competition, which was started last April and will continue until March. With a record of 270 eggs in the first four months, six hens from Nebraska lead their nearest Australian competitors by thirty eggs. At the end of the present contest, another competition will be inaugurated with 100 pens entered—ten from the United States, ten from England, three from Canada, three from New Zealand and the rest from Australia.

THE

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BUSINESS MANAGER.

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Rate card furnished on application.

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SWEET POTATOES.

I have reasons for believing that at least a portion of the orders for my sweet potato pamphlet failed to reach me. Therefore any person whose order has not been properly filled, will please address me at Carthage, N. C.

BRYAN TYSON.

PUBLISHER'S NOTES.

TO ADVERTISER

All advertisements and matter pertaining to advertising *must* reach us by the 25th of each month. Please bear this in mind.

Liberal Subscription Offer.

To induce non-readers of the SOUTHERN PLANTER to become subscribers, we beg to announce that all new subscriptions received between this time and December 1st will be given the remaining numbers of this year free. In other words, 50 cents will pay for a subscription from now until December 31, 1904.

Our regular subscribers, upon whom we have called so many times, will confer a favor, which will be reciprocated at any time, if they will bring this offer to the notice of their friends who are not subscribers to the SOUTHERN PLANTER.

WHERE HE CROSSED THE EQUATOR.

As one of the very few occasions when the wit of Rufus Choate was foiled, an incident is recalled when that brilliant lawyer was examining one Dick Barton, chief mate of the ship "Challenge." Choate had cross-examined him for over an hour, hurling questions with the speed of a rapid-fire gun.

"Was there a moon that night?"

"Yes, sir."

"Did you see it?"

"No, sir."

"Then how did you know there was a moon?"

"The 'Nautical Almanac' said so, and I'll believe that sooner than any lawyer in the world."

"Be civil, sir. And now tell me in what latitude and longitude you crossed the equator?"

"Ah, you are joking."

"No, sir, I'm in earnest and I desire an answer."

"Indeed. You a chief mate and unable to answer so simple a question!"

"Yes, the simplest question I ever was asked. I thought ever a fool of a lawyer knew there's no latitude at the equator."—*Success*.

WOOD'S SEEDS.

November is the best time to plant
**Hyacinths, Tulips,
Lilies, Crocus**
and other Spring Flowering Bulbs.

We carry full and complete stocks of all the best varieties. Our Fall Catalogue gives descriptions, prices and tells how to plant.

Catalogue mailed FREE.

Write for it.

T. W. WOODS & SONS,
SEEDSMEN, Richmond, Va.



"How to Grow Paper-Shell Pecans,"

FREE. Best varieties in U. S. True to variety. Gions cut from bearing trees by member of firm. Full descriptive Catalogue of ALL FRUIT trees, free.

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A SOUTHERN INSTITUTE OF TECHNOLOGY.

Forty-five instructors. Thoroughly equipped shops, laboratories and infirmary. Farm of four hundred acres. Steam heating and electric lights in dormitories. Degree courses in Agriculture, Horticulture, Civil, Mechanical and Electrical Engineering, Applied Chemistry and General Science. Shorter courses in Practical Agriculture and Practical Mechanics. Total cost of session of nine months, including tuition and other fees, board, washing, text-books, medical attendance, etc., about \$195. Cost to State students about \$165. Session began September 1, 1903. For catalogue and other information, apply to

J. M. McBRIDE, Ph. D., LL. D., President.

**Alfalfa Bacteria
Infected Soil**

Can be obtained from Ewell Farm Experimental Plot. A perfect stand three years of age, abundantly supplied with root nodules. Price \$1.00 per 2 bus. burlap bag, weight about 150 lbs., f. o. b. Ewell's Station, Tenn.

GEO. CAMPBELL BROWN,
Spring Hill Tenn.

There is more catarrh in this section of the country than all other diseases put together, and until the last few years was supposed to be incurable. For a great many years doctors pronounced it a local disease, and prescribed local remedies, and by constantly failing to cure with local treatment, pronounced it incurable. Science has proven catarrh to be a constitutional disease, and therefore requires constitutional treatment. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, Ohio, is the only constitutional cure on the market. It is taken internally in doses from 10 drops to a teaspoonful. It acts directly on the blood and mucous surfaces of the system. They offer one hundred dollars for any case it fails to cure. Send for circulars and testimonials.

Address, F. J. CHENEY & CO.,
Sold by Druggists, 75c. Toledo, O.
Hall's Family Pills are the best.

WITH THE ADVERTISERS.

The Blackman Stock Remedy Co. advertise their well-known goods in another column. Look up the ad. and send for descriptive circulars.

T. O. Sandy is advertising Holstein bulls and heifers elsewhere in this issue. He has a particularly choice lot of heifers which are now ready to go.

The Imperial Fruit and Stock Farm has a choice offering of poultry in this number. Look up the half page ad. and get some of these bargains.

The Weber, Jr., Gasoline Engine is advertised regularly in our columns by its makers.

Look up the ad. of Glen Rock Woolen Mills. It will interest you.

Macbeth is advertising his well-known lamp chimneys on another page.

"Hogology" is the title of a book that Dr. Haas would like to send to all of our readers. Refer to his ad.

The Breeder's Gazette has a full page ad. in this issue. This is the best live stock paper published, and we can furnish it along with the SOUTHERN PLANTER for \$2.00.

The Annandale Dairy Farm desires to purchase some nice dairy cattle.

Dr. H. H. Lee is advertising his Silver Laced Wyandottes.

Andersch Bros. will buy all of your furs, skins and pelts. Look up the ad.

Fleming Bros., chemists, of Chicago, have renewed their ad. for another year, and their well-known remedies should be kept on hand by all farmers.

The Cahoon Seed Sower is advertised by the Goodell Co.

The Woolson Spice Co., makers of Lyon Coffee, have a card in this issue.

The O. S. Kelly Co. resume advertising in this issue. The Kelly Duplex Feed Mill is their offering.

The Chattanooga Nurseries are a new advertiser in this number. This firm comes to us well recommended, and our readers should look into their stock before purchasing elsewhere.



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and live in the great "out-of-doors." We make firearms for every purpose suitable for boy or man, from \$2.50 to \$150.00.

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"Crack Shot"	\$4
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Springs can be adjusted to suit a boy 12 years old or the strongest man.

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MAJESTIC SELF FEED SHELLER.

This labor-saving machine meets the imperative demands of large farmers, feed stores, mills and elevator men. It is furnished either mounted or unmounted with wagon box elevator or double sacking elevator as illustrated. Its capacity is

75 to 100 Bushels An Hour.

The mounted sheller is peculiarly adapted to carrying on a profitable neighborhood business in custom shelling. It will not choke, is perfect working in sacking and feeding attachments. Built for long, efficient service and fully guaranteed. We make 20 styles of shellers, both hand and power. Ask for free catalogue.

KEYSTONE FARM MACHINE CO., 1554 W. Beaver St., York, Pa.



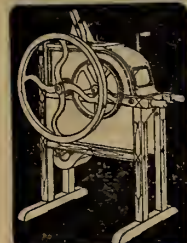
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THE O. S. KELLY CO., Springfield, Ohio.

TRY THIS MILL

15 days to prove that it grinds meal or feed, ear corn and small grains, faster and better than any other. If it doesn't, return at our expense.

Monarch Mills

either attrition or the imported French burr, approach perfection in make and service. Lead all others in popularity. Meet every farm need. Buy none until you get the Monarch catalogue.

Sprout Waldron & Co.
Box 202, Muncy, Pa.



HEEBNER'S FEED CUTTERS.

Feed all your fodder. By using Heebner's cutters with shredder attachment the whole of the nutritious stock is cut, crushed and shredded, and rendered edible. No waste. Animals eat it greedily and thrive. Shredder attachment costs \$5.00. The model ensilage cutter. Also make Tread Powers, Lever Powers, Little Giant and Penna. Thrashers, Wood saws, Feed Mills, etc. Catalog free.

HEEBNER & SONS, 25 Broad St., Lansdale, Pa.

The Snoddy Remedy Co. has a card in another column offering its Hog Cholera Cure. Our readers should investigate this offer.

Mr. G. Norris Watson is a new advertiser in this issue. He has some nice stock at reasonable prices and guarantees satisfaction.

The Hawkeye Incubator advertising starts up with this number. This company makes a good machine and would like to send its catalogue to any poultryman interested.

The Glen Allen Stock Farm is offering some choice Angus cattle. Look up the ad. and write to Mr. W. P. Allen, the proprietor, for prices and breeding.

Another new advertiser in this issue is D. B. Hendricks & Co., who have a very meritorious hay press with which they would like to acquaint our readers.

The Reliable Incubator and Booder Co. starts the season's advertising with this issue. By the way, this firm is offering a portion of its capital stock to the public. They will be very pleased to send you a prospectus, if you will only write for it.

Hollybrook Farm is offering some nice Berkshire pigs.

The Jeremy Improvement Co. has some nice Angora goats for sale.

The old reliable Frazer Axle Grease is being used in greater quantities than ever. It will be found advertised regularly in our columns in the future as in the past.

R. W. Haw, Jr., is offering some choice young Brown Leghorns.

Pit Games are offered by T. W. Jarman, Yancey Mills, Va.

Send for catalogue, descriptive of 32 choice varieties of poultry, to John E. Heatwole, Harrisonburg, Va.

The Annefield herd of Berkshires represent the finest blood lines in England or America. Mr. Butler, the proprietor, invites inspection of his stock at all times.

Armour's Blood Meal is recommended for scours in calves. Look up the ad. in another column and write to the nearest office for particulars.

The DeLoach saw mills are being advertised as usual in this issue. This firm claims to be the largest saw mill manufacturing plant in the world.

Home-made and well-made buggies and wagons are offered by the Richmond Buggy & Wagon Co. in another column.

Mr. Ashton Starke, the well-known implement dealer, has an interesting advertisement on another page.

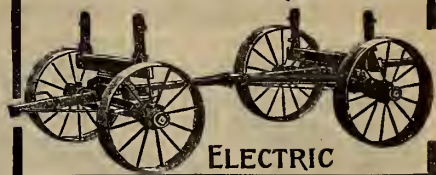
J. S. Moore's Sons have a page advertisement elsewhere in this number that will interest all housekeepers, we feel sure.

"Have you noticed any signs of improvement to-day?" asked the doctor. "Oh, yes," replied the nurse. "He swears now when I give him his medicine."—*Medical Journal.*

Wise Man's Wagon.

The man who has had experience in running a wagon knows that it is the wheels that determine the life of the wagon itself. Our **ELECTRIC STEEL WHEELS**

have given a new lease of life to thousands of old wagons. They can be had in any desired height, and any width of tire up to 8 inches. With a set of these wheels you can in a few minutes have either a high or a low down wagon. The Electric Handy Wagon is made by skilled workmen, of best selected material—white hickory axles, steel wheels, steel hounds, etc. Guaranteed to carry 4000 lbs. Here is the wagon that will save money for you, as it lasts almost forever. Our catalog describing the uses of these wheels and wagons sent free. Write for it. **ELECTRIC WHEEL CO., BOX 146 QUINCY, ILLINOIS.**

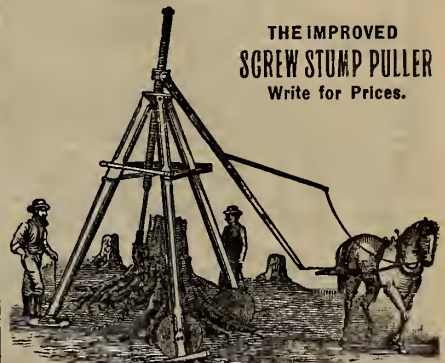


WE'LL PAY THE FREIGHT

and send 4 Buggy Wheels, Steel Tire on, - \$7.25
With Rubber Tires, \$15.00, 1 mfg. wheels 1/2 to 4 in.
tread. Top Buggies, \$28.75; Harness, \$3.60. Write for
catalogue. Learn how to buy vehicles and parts direct
Wagon Umbrella FREE. **W. V. HOOD, Cincinnati, O.**

THE IMPROVED SCREW STUMP PULLER

Write for Prices.



Chamberlin Mfg. Co., Olean, N. Y., U. S. A.

HERCULES STUMP PULLER



Clears an acre of heavy timber land each day. Clears all stumps in a circle of 150 ft. without moving or changing machine. Strongest, most rapid working and best made.

Hercules Mfg. Co., 413 17th St., Centerville, Iowa.

A Bushel In Less Than 3 MINUTES.

That's the way your feed will be ground when you use the

KEYSTONE

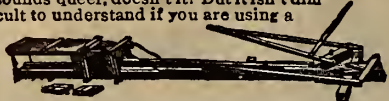
Triple Gear GRINDING MILL.

Built as strong as an anvil. Burrs are of hard white iron. Boxes and gey irons furnished with mill. Capacity of mill from 20 to 30 bushels per hour. We are making a special introductory price now. Write for the catalogue and prices on the full line. Corn shellers, planters, cultivators, feed cutters, etc.

Keystone Farm Machine Co.,
1554 Beaver St., York, Pa.

Pressing Hard Easy

sounds queer, doesn't it? But it isn't difficult to understand if you are using a



RED RIPPER Hay Press

It bales tight bundles, large or small, and does it with the least amount of strain on the horse. The Red Ripper has been twice entered in competition with other presses, both times at the Georgia state fair, where it was awarded first premium. Dealers who handle the Red Ripper say that it just drives other hay presses out of the market. The lowest priced press on the market, and costs less than others to operate. Progressive, economical farmers will want to know more and can be sending for our new Catalog No. 433. Distributing points, Baltimore, Memphis, Cincinnati.

Address: SIKES MFC. CO., Helena, Georgia.

Hendrick's Baling Presses



are classed with the best. If you are looking for a good press, either upright or perpetual at a reasonable price, write us for particulars.

D. B. HENDRICKS & CO., Kingston, N. Y.

"ELI" HAY BALERS.

38 styles and sizes.



The world's standard.

Work fastest, bales are tightest and shapeliest. Load cars to best advantage. Bales that endure, insure safety and facilitate work. Steel and wood frames, horse and steam power. Eli catalog free. Collins Plow Co., 1185 Hampshire St., Quincy, Ill.

WELL DRILLING MACHINES

The most successful money-making machines ever made. Also machines for boring wells with augers by horse power. Write us if you mean business.

Loomis Machine Co., Tiffin, Ohio.

The WEBER 14 H. P. Gasoline Engines for running grinders, shredders, cutters, threshers, etc. Free catalogue gives all sizes. Weber Gas & Gasoline Engine Co., Box 128 Kansas City, Mo.

WARRINER'S CHAIN HANGING STANCHION.
CLEAN, SAFE, COMFORTABLE.
MFG. BY W.B. CRUMB, Forestville, CONN.

GET ALL THE CREAM,

—BY USING—

The SUPERIOR CREAM SEPARATOR.

Does not mix water with the milk. It is the best Separator made. A trial convinces, and every Separator is guaranteed. Write today for Catalogue to the SUPERIOR FENCE MACHINE CO., 291 Grande River Ave., Detroit, Michigan.



MAGAZINES.

The November number of The Century, which opens Volume LXVII., celebrates that event by a new cover in color, and by a variety of colored insets, which include among the subjects Tropical Sunsets, Wild Animals, and Italian Gardens.

Edmund Clarence Stedman contributes the opening article on the New York Stock Exchange, entitled "Life 'On the Floor.'" As a veteran and retired broker, Mr. Stedman brings to this subject a personal knowledge, which is admirably supplemented by his trained literary style. The article makes a unique appeal to the interest of the lay reader, as well as to that of all men engaged in business with the exchanges. The paper is illustrated in a lively way by Blumenschein and Bacher.

Of the color work four pictures are by Maxfield Parrish, accompanying the first article of Edith Wharton's series on "Italian Villas and their Gardens," a project upon which the author and the artist were engaged last winter in Italy. Mrs. Wharton's special topic is Florentine Villas, and there is an introduction by her setting forth in general the desirable features of Italian Gardens.

A leading feature of the number is the opening paper of the new literary "find," Thackeray's letters recording his friendship with an American family, the Baxters of New York, to which Miss Lucy W. Baxter contributes an introduction, and which are accompanied by a number of drawings and interesting autographs of Thackeray. A piece of hitherto unrecorded adventure is entitled "Fighting the Hudson," in which H. Addington Bruce relates a perilous emergency in the course of the construction of the Hudson River tunnel, now nearly finished.

At the head of the fiction of the number is the first of a new novel entitled "Four Roads to Paradise," by Maud Wilder Goodwin, author of "Head of a Hundred," etc., a story of New York society people, the scene partly laid in Florence. In the short stories the element of humor predominates. "The Missing Exequatur," by Benjamin H. Ridgely, a laughable story of consular life; "The Marrying of Susan Clegg," by Anne Warner, a writer new to The Century; "The Reggie Livingstones' Country Life," a story of hunting society, by David Gray; "The Little Canoe," a humorous sketch of Porto Rico, by H. W. Phillips. Two stories of a more sentimental cast are "The Shadow of Love," by George Hibbard, and "The Summer of St. Martin," a phantasy of very delicate charm by Dr. Weir Mitchell. The editorial articles are "All Eyes on New York!" relating to the municipal election, and "Some Effects of Modern Publicity," and there is a variety of light material.

Readers of the November St. Nicholas will turn first to and linger long-

UNION LOCK POULTRY FENCING

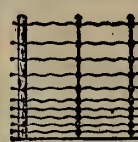


HAS BEEN FULLY TESTED AND FOUND SUPERIOR TO ALL OTHERS.

Will fit uneven ground without cutting. Every part can be stretched perfectly. Made of

high grade galvanized steel wire. All horizontal lines are cables, making it stronger. Has fine mesh at the bottom for small chicks. We also make extra heavy for gardens, lawns, etc. The largest poultry farms are using this fence—over 700 rods by Lakewood (N. J.) Farm Co. We pay freight and satisfy every one or no sale. Can ship from N. Y., Chicago, or San Francisco. Write for free catalog of Farm, Lawn and Poultry Fencing.

CASE BROS., Box 340, Colchester, Conn.



Genuine Spiral Spring Wire FENCES AND GATES

If your dealer does not have our goods in stock you can buy direct at Manufacturers' Price. Write for Catalogue and secure agency.

INTERNATIONAL FENCE AND F. CO.
Columbus, Ohio.



IF YOU WANT

a better, more practical, longer lasting, heavier galvanized wire fence, YOU WANT PAGE. PAGE WOVEN WIRE FENCE CO., Adrian, Mich.



LAWN FENCE

Many designs. Cheap as wood. 32 page Catalogue free. Special Prices to Cemeteries and Churches. Address COILED SPRING FENCE CO. Box Q Winchester, Ind.



SENT ON TRIAL

A Fence Machine that will make over 100 Styles of Fence and from 50 to 70 rods a day AT ACTUAL COST OF WIRE. Horse-high, Bull-strong, Pig and Chicken-tight. Wire at Wholesale Prices. Catalogue Free. Kitzelman Bros. Box 155 Muncie, Ind.



FENCE! STRONGEST MADE.

Bull strong. Chicken tight. Sold to the Farmer at Wholesale Prices. Fully Warranted. Catalog Free. COILED SPRING FENCE CO. Box 58 Winchester, Indiana, U. S. A.

STOP THAT RATTLING, TIGHTEN YOUR OWN BUGGY TIRES. No heating; does not mar the paint; any one can operate. Machine complete with 100 washers sent on receipt of \$2.00. Guaranteed to do the work. Your money back if not as represented. RAPID TIRE TIGHTENER CO., Station F., Toledo, Ohio.



Now Plant Seed.

You want the book that tells how, when and what to sow.

SEED SOWER'S MANUAL

sent out because we put in it a description of the old reliable Cahoon Broadcast Sower. The book is free. Better write for it now.

GOODALL CO., 63 Main St., Antrim, N. H.

ELMWOOD NURSERIES.

ASPARAGUS

100,000 2-yr. old Asparagus roots, 5 varieties. A special rate of \$3.50 per 1000 for 2 mos. for BARR'S, PALMETTO, CONOVER.

APPLES

A large general assortment, including WINESAPS and YORK IMPERIALS.

Splendid Assortment of Ornamental, Shade and Fruit Trees.

EGGS from B. P. Rocks, Light Brahmas, Brown Leg-horns at \$1.00 per 13.

WRITE FOR OUR CATALOGUE.

J. B. WATKINS & BRO., Hallsboro, Va.

EMPORIA NURSERIES

Offer a line of Nursery Stock, mostly APPLE TREES, 4 to 5 feet, and PEACH TREES, 3 to 4 feet, at reduced prices to clear land. All Stock healthy and free from Crown Gall, Aphis, San Jose Scale, or any other disease, and WILL BE FUMIGATED BEFORE shipped.

Send for reduced price list. Good No. 1 Agents for 1904 wanted. C. S. LINDLEY, Prop., Emporia, Va.

Also agents for Universal and Gardner's Dust Sprayers; far ahead of any other and cost of power is very small. Send for price and description.

TREES! TREES!!

I offer a fine lot of whole root trees.

Apples, Pears, Peaches, Cherries, Plums, Grape Vines, Raspberries, Etc.

Save agent's commission by sending your orders to the nursery.

CATALOGUE FREE.

All Stock Inspected and Fumigated.

WERTZ'S NURSERY, Salem, Va.

Strawberry Plants,

All grown in fresh rich ground, healthy, well-rooted plants that will please you; over 30 kinds to offer Raspberry plants and Peach trees also; see us before you buy. Our stock has been thoroughly inspected and found free from any disease.

Address JOHN LIGHTFOOT, Sherman Heights, Tenn.

est over the opening chapters of B. L. Farjeon's "A Comedy in Wax." "A Comedy in Wax" is the story of little Lucy, her sister Lydia, Lydia's lovers, and Mme. Tussand and her waxworks—the famous waxworks exhibition in Marylebone Road which for nearly a century has been one of the most popular shows in London. There are illustrations by Fanny Y. Cory in her usual happy vein; and the story promises to increase in interest as the months come around. There are good short stories too in the November issue for both girls and boys. "Ted's Contract" tells of a manly little lad's adventures in his loyal devotion to his father's interests; and Albert Bigelow Paine's "Two Little New York Maids" are well worth knowing. "The Poison Bubble" is a real, good, old-fashioned magic story; "Richard, My King," by Livingston B. Morse, is a new setting of the beautiful story of Blondel's love for his king; and Charlotte Sedgwick's "The Late Unpleasantness" is a capital tale of real boys and girls. O, the November St. Nicholas is rich in fiction!

The best part of the more solid portion of the feast is a discussion by James M. Dodge, president of the American Society of Mechanical Engineers, on "The Money Value of Training." Mr. Dodge gives suggestions and statistics of great value, and urges every lad, whatever his life-work is to be, to invest in himself, by increasing his own potential energy. Then George Ethelbert Walsh tells about "Some Queer Mail Carriers and Their Ways"; and Dallas Lore Sharp writes of "Bird Friendships."

"A House Divided" is the taking title of the novel in Lippincott's Magazine for November. Its author's name, Ella Middleton Tybout, is a familiar one to readers of Lippincott's Magazine, though heretofore her productions have been in the line of short stories. Her "Parables in Black" lately running through Lippincott's are particularly striking and indicate that which is richly fulfilled in this latest work. The Little State of Delaware has been chosen by Miss Tybout for the placing of "A House Divided," and her portrayal of a farmer who, because he believes his wife to be untrue to him, has not spoken to her for sixteen years, is a remarkably clever bit of characterization. Lippincott's novels are always worth while—and the November number sustains this opinion.

"The Girl with the Banjo" is by a writer whose pen-name, Jean D. Hallowell, keeps one guessing who is the real author of so racy a tale. The sex is confessed by such expressions as "a saucy little lace petticoat," and the whole thing shows the piquancy of a woman rather than the touch of a "mere man."

"The Man in the Tower," by Francis Howard Williams, is a forceful story of a railroad signal tower, where,

Peach and Apple Trees,

IBONAVISTA NURSERIES, Greenwood, Va.

We offer a fine lot of choice trees for Fall and Spring planting

Our apple trees are the best—Wine Sap, Mammoth Black Twig, York Imperial and Albemarle Pippin, all perfect and well grown trees.

Our peach trees are the standard sorts, Stump, Elberta, Bilyeu's (Comet,) Wonderful, Champion, Globe, Picquet's Late, Albright's Winter, Crawford E. & L., etc.

We send out none but good trees and have never had a complaint made by any purchaser of our stock. Order soon, especially Peach's, as good trees will be very scarce this season.

CHAS. F. HACKETT, Manager.

1000 Per Cent. Profit in.. Wealth and Health

In fresh, luscious, home grown! **STRAWBERRIES**

allowed to ripen thoroughly on the vines. We sell the plants packed to carry fresh anywhere in the United States. Our 120 page manual (free to buyers) makes growing for pleasure or profit plain to all. Plant now. Also save half on:

FRUIT TREES

by buying direct from us, saving agents' profits. Write for free Catalogue, mentioning this paper.

CONTINENTAL PLANT CO. KITTRELL, N. C.

ROOFING TIN

Iron and paper roofing, nails, builder's hardware, sash, doors, etc., carriage and wagon goods, paints and oils, cook and heating stoves, guns, pistols, rifles, "Robin Hood" loaded shells. Do you use any of the above? Write us.

HARRIS HARDWARE CO., 409 E. Broad, Richmond, Va.

PATENT YOUR IDEAS

\$100,000 offered for one invention; \$3,500 for another. Book "How to Obtain a Patent" and "What to Invent" sent free. Send rough sketch for free report as to patentability. We advertise your patent for sale at our expense.

CHANDLER & CHANDLER, Patent Attorneys 976 F Street, Washington, D. C.

SKUNK Skins, HORSE HIDES and CATTLE HIDES

and all other kinds of Raw Furs bought for spot cash. 10 to 50% more money to you to ship to us than to sell at home. Write for price list and market report. **HUNTERS' and TRAPPERS' GUIDES** \$5000. book, 300pps cloth bound illustrating all fur animals. All about trapping, trappers secrets, kind of traps, decoys, &c. Special price \$1. to Hide and Fur Shippers. **ANDERSCH BROS.,** Dept. 8 7, Minneapolis, Minn.

HOW TO FEED AND BREED HOGS

is of importance to swine growers. A practical, clean, common-sense swine paper for farmers can be had from now to January, 1905, by sending 10 Cents in Silver at once to **BLOODED STOCK,** Oxford, Pa.

The dealer who
sells lamp-chim-
neys to last, is
either a shrewd
or an honest man.

MACBETH.

How to take care of lamps, including the
getting of right-shape chimneys, is in my
Index; sent free.

MACBETH, Pittsburgh.

FRAZER

Axle Grease

Best in
the world.

Its wearing qualities are unsurpassed, ac-
tually outlasting 3 bxs. any other brand.
Not affected by heat. Get the Genuine.
FOR SALE BY ALL DEALERS.

SAN JOSE SCALE and other insect
can be con-
trolled by using
GOOD'S CAUSTIC POTASH
WHALE OIL SOAP. No. 3.

It also prevents Curl Leaf. Endorsed by en-
tomologists. This soap is a fertilizer as well as
insecticide. 50 lb. kegs, \$2.50; 100 lb. kegs, \$4.50.
Half barrels, 270 lbs., at 3½¢, per lb.; barrels,
425 lbs., at 3¼¢. Large quantities, special rates.
Send for circular.

JAMES GOOD,
939—41 N. Front St., PHILADELPHIA, PA.

AGRICULTURAL LIME
AND BUILDERS'

Send for Circulars and Price-List

FELLSWORTH LIME WORKS,
REEVES CATT, Agent,
Bodley, Augusta County, Virginia.

✻ POSITION WANTED ✻

By an experienced farmer as manager
on large farm. Can take charge at once.
Best references given. Address "FAR-
MER," R. F. D. No. 5, Richmond, Va.

**Krausers' Liquid
Extract of Smoke**

Smokes meat perfectly in a
few hours. Made from lucky wood.
Delicious flavor. Cleaner, cheaper. No
smokehouse needed. Send for circular.
E. KRAUSER & BRO., Milton, Pa.

in a supreme moment of danger, a man
becomes almost divine.

A humorous story of a double elope-
ment by Ralph Henry Barbour, called
"At the Crown and Sceptre," is in the
same delightful vein which has
brought the author to the top wave of
popularity.

"The Brothers Implacable," by Elea-
nor L. Stuart, is a stirring episode of
a secret society pitted against a moth-
er's love for her son.

Clinton Dangerfield's little tale called
"Hiram Mathews's Monument" tells
about a village eccentric whose desire
to be remembered by his fellow-citi-
zens leads him to do that which places
him among the local immortals.

THE YOUTH'S COMPANION IN 1904.

As the years increase The Youth's
Companion endeavors to keep pace
with them in all that is wise, beautiful
and progressive, and not only to retain
but to deserve the honorable and ex-
ceptionally high place it holds in the
confidence and affection of three gen-
erations of readers. The greatest
living authors in all branches of litera-
ture continue to contribute to it.

Among the important series of arti-
cles will be one on the occupation of
the farmer in many parts of the world
—in England, in Ireland, in India, in
Argentina, etc.

The annual announcement number
of The Companion, describing the prin-
cipal features of The Companion's new
volume, will be sent to any address,
free.

The new subscriber for 1904 will re-
ceive all the issues of The Companion
for the remaining weeks of 1903 free
from the time of subscription; also
The Companion Calendar for 1904,
lithographed in twelve colors and gold.

THE YOUTH'S COMPANION,
144 Berkeley St. Boston, Mass.

THE TEMPLE PUMP CO.

We are in receipt of an interesting
catalogue from the Temple Pump Co.,
Chicago, who have an advertisement
in another column. This catalogue
treats particularly of their "Master
Workman Engine." As this firm has
been in business now fifty years, it is
to be presumed that they know how to
make an engine. This engine can be
used either as portable engine or a
stationary one, and is invaluable to
every farmer. Among a few of its
uses are sawing wood, pumping water,
threshing, grinding, irrigating, and
running the cream separator. This
company would like to mail this cata-
logue to every farmer who will send
his address.

HESSLER MAIL BOX.

A cheap, strong and durable mail
box for free delivery routes is ad-
vertised by The H. E. Hessler Co., of
Syracuse, N. Y. Look up the ad. and
get some of your neighbors to join you,
thereby securing very low rates.

ADVICE FREE

IN ALL LEGAL MATTERS.

Especially on Marriage and Di-
vorce, Partnership, Mortgages,
Bills-Sale, Deeds, Bonds, Notes
Stocks, Mining, Mining Com-
panies. Mining Investments,
Contracts, Agreements, Collec-
tions, Damages. Claims, Inter-
est. Homestead, Wills, Estates,
Etc., Etc. Correspondence
strictly confidential. Address

LEGAL BUREAU, Dept. U.
1122 Market Street, San Francisco, Cal.

The Southern Planter.

If troubled with any form of ner-
vousness or Dyspepsia, Palpitation of
the Heart or Sleeplessness, Rush of
Blood to the head or General Debility

Can Be Cured By

DR. DUGNAL'S

FAMOUS NERVE PILLS.

40 DOSES BY MAIL, POSTPAID, 50c.
DUGNAL REMEDY CO.,

P. O. Drawer No. 52. Dept. J.
NEW HAVEN, CONNECTICUT.

DO YOU OWN STOCK?

If so, do you know how to
care for it when sick? Our
Stock Book tells you all about
animals and their diseases.
Write for terms. Agents want-
ed everywhere. Most liberal
terms. Outfit free.

B. M. ANDERSON & CO.,
Box 533. - Richmond, Va.

**THE KEELEY
INSTITUTE
GREENSBORO, N.C.**

For the treatment of THE LIQUOR, OPIUM, MORPHINE and
other Drug Addictions. The Tobacco Habit, Nerve Exhaustion

HOMES AND THE PLACE TO FIND THEM.

No place in the United States can a man do so well at farming, for the money invested, as in Virginia. Lands are cheap; climate good, and the best of markets close at hand. It is the State of all others, for a comfortable all the year round home. The James River Valley Colonization and Improvement Company offer superior advantages to land purchasers. For free 36 page land pamphlet, address

W. A. PARSONS, Vinita, Va.
C & O Main St. Depot, Richmond, Va.

To HOMESEEEKERS.

"THE BUSINESS OF FARMING IN VIRGINIA."

Is the title of a new pamphlet issued by the Norfolk and Western Railway Company. We will gladly mail you a copy.

W. B. BEVILL, PAUL SCHERER, Agt.,
G. P. A., Lands and Immigration,
Roanoke, Va.

I HAVE A LARGE LIST OF

FRUIT, POULTRY and TRUCK FARMS

Ten, Fifty and One Hundred Acres each, with good buildings, close to steam and trolley lines, easy access to the city. Also,

GRAIN AND STOCK FARMS

From 100 to 1,000 acres at low prices—all the way from \$5 to \$50 per acre. Write for Catalogue.

J. R. HOCKADAY, Richmond, Va.
Box 257.

IF YOU WISH TO SELL —OR BUY— VIRGINIA LANDS

Communicate with us. Write for free "Virginia Real Estate Journal," containing many splendid bargains.

R. B. CHAFFIN & CO., Inc.,
No. 1 N 10th St., Richmond, Va

2 GOOD DAIRY FARMS,

Vicinity of Washington FOR SALE.

Electric railway through one and near the other. For particulars, address

L. E. WALT, 745 7th St., S E,
Washington, D. C.

I Can Sell Your Farm....

If located in one of these Virginia counties: Prince George, Chesterfield, King William, Gloucester, New Kent, King and Queen, Hanover. Send description, stating price.
JOHN JELINEK, 1116 Pine Alley,
Braddock, Pa.

FINE FARMS In the great fruit grain and stock section of VIRGINIA. Best climate and water in the U. S. Near great markets, with best educational advantages. For further information, address

ALBEMARLE IMMIGRATION CO.,
SAM'L B. WOODS, Pres. Charlottesville, Va.

Go South.

For full particulars write
A. JEFFERS,
Norfolk, Va.

REPORTS.

U. S. Department of Agriculture, Washington, D. C. Animal Industry. Bulletin 46. The Milk Supply of 200 Cities and Towns.

Bureau of Animal Industry. Bulletin 48. The Animal Industry of Argentina.

Office of Experiment Stations. Experiment Station Record, Volume XV., No. 2.

Bureau of Plant Industry. Bulletin 49. The Culture of the Central America Rubber Tree.

Office of Public Road Enquiries. Bulletin 26. Proceedings of the National Good Roads Convention at St. Louis, Mo., April, 1903.

Bureau of Soils. Bulletin 22. The Chemistry of the Soil as Related to Crop Production.

Bureau of Soils. Circular 11. Reclamation of Alkali Land at Fresno, Cal.

Farmers' Bulletin No. 179. Horse-shoeing.

Farmers' Bulletin No. 180. Game Laws for 1903.

Maryland Experiment Station, College Park, Md. Bulletin 89. Experiments with Potash as a Fertilizer.

Maryland Agricultural College, College Park, Md. College Quarterly, August, 1903. Analyses of Fertilizers.

Michigan Experiment Station, Agricultural College, Mich. Special Bulletin 20. Report of the Upper Peninsula Sub-Station.

Minnesota Experiment Station, St. Anthony Park, Minn. Bulletin 82. Hemorrhagic Septicæmia.

Bulletin 83. Apples and Apple Growing in Minnesota.

New York Experiment Station, Geneva, N. Y. Bulletin 233. Rennet Enzyme as a Factor in Cheese Making.

Bulletin 234. Cold Cured Cheese.

Bulletin 235. Two New Apple Rots.

Bulletin 236. Conditions Affecting Chemical Changes in Cheese Ripening.

Bulletin 237. The Role of the Lactic Acid Bacteria in the Manufacture and Ripening of Cheddar Cheese.

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Bulletin 138. Orchard Studies XI. A Consideration of the Principles and Technique Involved in the Fermentation and Final Finishing of Ciders.

Bulletin 139. Orchard Studies XII. The Chemical Composition of Ciders.

Bulletin 140. Orchard Studies XIII. Some Observations on Crown Gall of Apple Trees.

Virginia Weather Bureau, Richmond, Va. Report for September, 1903.

Wyoming Experiment Station, Laramie, Wyo. Index Bulletin C.

Imperial Department of Agriculture for the West Indies, Barbadoes, W. I. Agricultural News, September, 1903.

BOOKS AND PAMPHLETS.

Grasses, and How to Grow Them.—The above is the title of Professor Shaw's new book just issued from the presses of the Webb Publishing Co. It is the only book ever published in America which treats of the growth of the grasses of this continent in a regular and systematic way. The book has 470 pages. It is neatly bound in cloth and is sufficiently illustrated. It is written in that clear, plain and orderly style which characterizes all Professor Shaw's writings. So practical is the information presented, that while the book discusses all the grasses of any considerable economic value grown in America, the person who never grew them previously should be able to do so in an intelligent way after reading the book. Price, cloth, \$1.50. We can supply this book at the published price.

The Feather's Practical Pigeon Book.—By J. C. Long. Profusely illustrated. Published by Geo. E. Howard, Washington, D. C. Price, 50 cents. This book will be found of interest and value to those keeping or contemplating keeping fancy pigeons. We can supply the book at the publisher's price.

The School and the Commonwealth, the Centre of Our Larger Hope.—An address to the graduates of the Richmond High School, June, 1903, by Wm. M. Thornton, LL. D., University of Virginia.

Principles of Profitable Farming, published by the German Kali Works. Nassau street, New York city, will be sent free if you mention THE SOUTHERN PLANTER.

PREMIUM LISTS, CATALOGUES, ETC.

Virginia State Horticultural Society. Programme of the Eighth Annual Session, to be held at Pulaski, December 2d and 3d. Walter Whately, Secretary, Crozet, Va.
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DAVID W. LEARY, Mattoax, Va.

Association. Premium list of the Third Annual Exhibition November 23-28, 1903, at the Masonic Temple, Broad street, Richmond. Frank Jenkins Secretary, 517 W. Broad street, Richmond, Va.

Paper Shell Pecans. Fruit Guide and Catalogue. B. W. Stone & Co. Thomasville, Ga.

DeLaval Separator Co., Cortlandt St., New York city. How to apply business principles to the testing and selection of a Separator.

Studebakers' Farmer's Almanac, 1904. Studebaker Bros. Mfg. Co., South Bend, Ind.

The Reliable Incubator and Brooder Co., Quincy, Ill. "A reliable business opportunity." Prospectus offering stock in the capital of the Company.

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"Yes, but the ducks swam," smiled the old man.

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A few good Horses and Mules also for sale.

Also one-half interest in twenty-four thousand acres West Virginia Coal and Timber lands. Will take in exchange good James River lands. Call on or address

JOHN MATHEWS, East Richmond, Va.

FOR SALE.—My Trotting-bred Stallion

GEORGE BURNS, foaled May 14, 1900. Mahogany bay, star in face, left hind foot white, of good style, easy to handle; will make good breeder. Write for his breeding.

J. TABB JANNEY, Van Clevesville, W. Va.

BILTMORE FARMS, - Biltmore, N. C.

Headquarters for GOLDEN LAD JERSEYS,

Also Get of TREVARTH and GEN. MARIGOLD. ✕ ✕ ✕

GOLDEN LAD'S SUCCESSOR. First and sweepstakes over all at the Pan-American Exposition, the champion JERSEY BULL OF AMERICA, and out of Golden Ora, our great prize-winning cow, both born and developed on these Farms, is among our service bulls.

Biltmore Jerseys are a combination of large and persistent milking qualities with an individuality that wins in the show ring.

SPECIALTY. Write for descriptive circular of the best lot of young bull calves ever offered, both for breeding and individuality. They are by noted sires and out of large and tested selected dams. Many of these calves are fit to show and win in any company.



BILTMORE POULTRY YARDS.



SPECIALTY. Write for descriptive circular of eggs from our prize-winning pens. Over 50 yards to select from, made up of the winners at the leading shows for the last two seasons. If you want winners you must breed from winners.

Headquarters for the best IMPORTED ENGLISH BERKSHIRES.

APPLY TO BILTMORE FARMS, BILTMORE, N. C.

THE IMPERIAL .. FRUIT and POULTRY FARM ..

OFFERS

1,000 Cockerels and Pullets

All HIGHLY BROOD of the following breeds:

Barred and White Plymouth Rocks, White and Silver=Laced Wyandottes and Brown Leghorns, at = = = \$1.00 each.

WRITE AT ONCE AND GET THE BEST.

(No Ducks to offer at present).

P. H. HEYDENREICH, Prop., : : : Staunton, Va.

ANGORA GOATS.



A few pairs for sale—High grades, \$15; Registered, \$40 per pair.

JEREMY IMPROVEMENT CO.,
SAXE, VA.

150 Jacks, Jennets and Mules.

Best assortment I ever owned. Can suit you exactly. Write for description and prices. Also will sell 2 Percheron Stallions at close figures.

BAKER'S JACK FARM,
Lawrence, Ind.

Knight & Jetton,

Breeders of and Dealers in
Jacks, Jennets, Stallions.
Durham and Hereford
YEARLINGS.

Send stamp for Catalogue.
Murfreesboro, Tenn.



Jacks, Jennets and Stallions

FOR SALE. FINE JACKS A SPECIALTY. When writing state exactly what you want or come and see our stock.

W. E. KNIGHT & CO.,
Route 5. Nashville, Tenn.



Sale or Exchange

2 BEAUTIFUL JACKS, for pure-bred Red Polled cattle, good draft or coach stallions. W. S. MOTT, Dixondale, Va.

DORSETS

HEREFORDS.

Some Exceptionally Rare Bargains to Quick Buyers.

My herd bull, bull calves and Dorset bucks. Registered stock.

H. ARMSTRONG, LANTZ MILLS, VA.

PURE-BRED

M. BRONZE TURKEYS, GOLDEN and SILVER PENCILED HAMBURG and BARRED PLYMOUTH ROCK Chickens. Eggs in season. For sale by T. J. WOOLDRIDGE, French Hay, Va.

FOR SALE AT A BARGAIN.

A thoroughbred Registered HOLSTEIN-FRIESIAN Bull calf. H. W. MANSON, Crews, Va.

THE INTERNATIONAL LIVE STOCK EXPOSITION FOR 1903.

The leading agricultural and live stock educators of the United States and Canada are paying tribute to the value of the International Live Stock Exposition to the country in almost every current issue of the agricultural and live stock press. A word, therefore, as to the arrangements for the 1903 exhibit will no doubt prove of value to your readers.

The Board of Directors have issued a statement regarding the new coliseum, and while it is regrettable that we will not have our entire buildings at our disposal this year, nevertheless with the old building, provided with greatly increased stall room and with better arrangements for pens for the hogs and sheep, we will be able to handle the show more advantageously than any of its predecessors. Temporary facilities will be constructed to secure ample room for each department to prevent any branch crowding the other.

The programme will be arranged to give each and every breed and kind full benefit of all that the show implies to the exhibitor.

The live stock people have shown their earnestness in the welfare of the International by taking memberships in the permanent organization, yet a more general membership is looked for to insure continued success. In this connection there is no change in the rules or regulations of the Exposition. The awards are open to the same competitors as heretofore, whether exhibitor is a member or not, so that whether your application for membership is filed as yet or not, your relationship so far as being an exhibitor is concerned is the same as at former shows.

The entries and inquiries received indicate a greater interest and larger exhibit than at any of the previous exhibitions.

The railroads have given the same rates for visitors, with earlier selling dates for exhibitors, as published each previous year, and additional special excursions will be run this year by several of the lines reaching Chicago. Everything points to a big event November 28th to December 5th at Chicago.

W. E. SKINNER.

ONE WAS SUFFICIENT.

Jimmy, aged five, had been naughty, and his mother had punished him in the good, old-fashioned way. His father pretended to be greatly shocked at overhearing the aggrieved youngster express a hope that a large stray bear might happen along some dark night to make of his offending parent.

"But, Jimmy," said his father, impressively, "you shouldn't say such dreadful things. You should always remember, my son, that a boy never has more than one mother."

"Thank God for that!" breathed Jimmy fervently.—November Lippincott's.

Kentucky Herefords

Headed by the famous

IMPORTED BRITISHER

No. 145096 Champion Bull over all breeds in England and Grand Sweepstakes Champion at Chicago 1902 Live Stock Exposition.

We can furnish buyers with anything they wish from the FANCIEST THAT CAN BE BRED to the cheaper class usually desired by the beginner. Write us before buying. Glad to answer inquiries.

Giltner Bros., Eminence, Ky.

ELLERSLIE FARM

Thoroughbred Horses
AND SHORTHORN CATTLE,
Pure Southdown Sheep
and Berkshire Pigs.

FOR SALE. R. J. HANCOCK & SON,
CHARLOTTESVILLE, VA.



COOK'S CREEK HERD
Scotch-Topped
Shorthorns

Herd Headed by Governor Tyler, 1585 48. Young Bulls for sale. Inspection and correspondence invited.

HEATWOLE & SUTER, Dale Enterprise, Va.

Quietude SHORTHORNS FOR SALE.

1 yearling bull, 3 bull calves 2 two-year-old heifers bred to a pure Scotch bull, 3 yearling heifers and a few cows. This stock is first class and in excellent condition. Write to or come to see

T. J. THOMPSON, Swoope, Va

PURE BRED
Short Horn Calves
from fine Stock. Also
Yorkshire Pigs

of very Prolific Breed.

JAS. M. HOGE, Hamilton, Va.

SPRINGWOOD SHORTHORNS. SPECIAL OFFERING.

4 yearling bulls, sired by Verbena's champion No. 129881. One two-year-old POLAND-CHINA Boar, a fine breeder, recorded bred in Ohio, sired by Guy Wilkes.

Good 8 weeks' old POLAND CHINA Pigs, \$5.00 each. Pedigrees furnished with all stock sold. Inspection invited.

WM. T. THRASHER, Springwood, Va.

WOODLAND DORSETS.

ONE of our customers writes: "My sales of grade Dorset winter lambs run this year: first 87 head brought \$870; then prices declined somewhat. I am looking for another good Dorset ram." Woodland Dorsets are standard in excellence.

J. E. WING & BROS., Mechanicsburg, Ohio.

BUILDING THE HOG HOUSE.

This subject comes up to every hog owner and as the cost of such a building is one of the first considerations and an item that in many cases causes poor protection and consequently a loss in pork to the owner. Yet the cause and loss go on, one following the other for, the want of a start of a first-class house to protect against cold and storm. A few years ago C. E. Morrison gave this subject much attention and as the result he built a pen at small expense that is as near an ideal for all purposes as can be devised, one that can be built cheaply and extended from time to time at will without disturbing the first part. Full designs and plans of this model hog house will appear in the November issue of *Blooded Stock*, that great practical swine paper edited by farmers that get right at its subject, with sleeves rolled up, in a common sense way. It is being advertised in the columns of this paper and also in our clubbing list. It is worth having and stops when the subscription expires.

OF VALUE TO HORSEMEN.

Do you turn your horses out for the winter? If so, we want to call your attention to a very important matter. Horses which have been used steadily at work, either on the farm or road, have quite likely had some strains whereby lameness or enlargements have been caused. Or perhaps new life is needed to be infused into their legs. Gombault's Caustic Balsam applied as per directions, just as you are turning the horse out, will be of great benefit; and this is the time when it can be used very successfully. One great advantage in using this remedy is that after it is applied it needs no care or attention, but does its work well and at a time when the horse is having a rest. Of course, it can be used with equal success while horses are in the stable, but many people in turning their horses out would use Caustic Balsam if they were reminded of it, and this article is given as a reminder.

HEEBNER'S ENSILAGE AND FEED CUTTERS.

The Feed and Ensilage Cutters manufactured by Heebner & Sons, Lansdale, Penna., are intended to avoid much of the waste which ordinarily results in the feeding of the corn crop. Too many overlook the feed value in the lower stalk, which lies around on the feed lot until spring and is then gathered and burned. If the stalk be cut and shredded there need be little if any loss. The Heebner cutter with Shredder attachment, are admirably adapted to this work. Each machine may be made a combination cutter, crusher and shredder, putting the stalk in the best possible condition for mastication of the whole by the animal. A power well adapted to their operation, and one without expense to procure because always present on the farm, is the Heebner Level Tread Pow-

SOLID COMFORT

Of
the
**RIGHT
SORT.**



At
the
**RIGHT
TIME**

Is what is wanted when one is seeking pleasure while driving, and this may be secured by using a **CELEBRATED LEHMAN HEATER**.

They are universally recognized as the **STANDARD CARRIAGE, WAGON AND SLEIGH HEATER**. *200,000* Lehman Heaters are in actual use. They burn Lehman Coal, from which there is no smoke, smell nor danger, and may be operated at a cost of 2 cents per day.

For sale by all carriage, harness and hardware dealers. Write us for booklet telling more about them.

LEHMAN BROS., MFRS.,
10 Bond St., New York.

J. W. ERRINGER, Gen. W. Sales Agt.,
297 Wabash Avenue, Chicago, Ill.

We Are Still in the Business....

"HILL TOP" Stock at Shadwell, Va.

Having changed our residence, we brought with us and have for sale a choice lot of **HILL TOP** stock.

Jersey Cattle, Southdown and Shropshire Sheep, Berkshire Hogs and B. B. R. Game Chickens.

Our Berkshire Pigs are now closely sold up, but we will have a fine lot ready to ship after September. We will be glad to serve our old friends and are always glad to make new ones.

We have won more premiums on sheep and hogs at State and County Fairs than all other breeders in Virginia combined.

H. A. S. HAMILTON & SONS, Shadwell, Va.

F
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BERKSHIRE PIGS

of choice breeding, and to make them more desirable, they are fine individuals, properly fed; therefore they develop well. Write

Forest Home Farm,
Purcellville, - - Virginia.



IT PAYS TO DEHORN.

The best dehorner, the most humane and easiest to use is the **Keystone Dehorning Knife**. Cuts on four sides at once, without crushing or bruising. Highest award at world's fair.

Hornless cows give more milk. Hornless steers make better beef.

Orders with cash filled from Chicago if desired. Send for circulars. **M. T. PHILLIPS, Box 45, POMEROY, PA.**

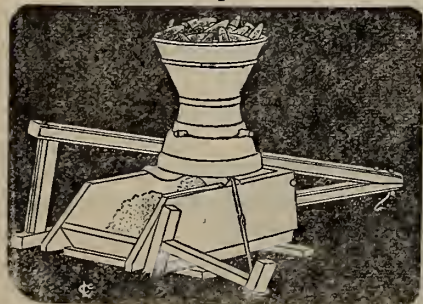
er. These powers have been manufactured by the Heebners, father and sons, for upwards of sixty years. They are strong and durable and well adapted to serve many uses on the farm in addition to Ensilage cutting. The Heebner Catalogue is a very interesting book on these and other specialties of the Heebner manufacture. Consult the advertisement and write the firm for it.

YOUR MONEY BACK IF YOUR'RE NOT SATISFIED.

Do you suppose that a company, with a capital of \$500,000.00 paid in full and the proud reputation of 36 years of continuous success, would make such an offer and not carry it out to the letter? Do you suppose we would jeopardize our standing with the public and our chances of still greater success by failing to fulfill any promise we make? Do you suppose we would make such an offer if we did not have the utmost confidence in the satisfying quality of our goods? We know we can please you and save you money, for Hayner Whiskey goes direct from our distillery to you, carries a United States Registered Distiller's Guarantee of purity and age and saves you the big profits of the dealers. Read our offer elsewhere in this paper.

THE HAYNER DISTILLING CO.

Among feed mills now on the market we give illustration of one whose qualities, we think, will commend it strongly to the general feeder. It is the Triple Geared Sweep Mill manufactured by S. Freeman and Sons Mfg. Company, Racine, Wis. Many readers are familiar with the illustration from having studied it in the advertisement elsewhere. It is the practical kind of mill with but few parts.



The illustration shows it as a corn crusher and grinder. At this work its capacity reaches 20 bushels of ground feed per hour. But it is adjustable in character, and does equally good work, though of course, less rapid in fine grinding of oats, rye, wheat, etc., with its finer set of burrs.

Smooth running and the absence of all jerking motion characterizes it. It is one individual of a most valuable and practical line of farm appliances, such as feed and ensilage cutters, corn shellers, wood saws and windmills manufactured by the above company. It should receive the careful consideration of any feeder who is about to buy a mill.

HOG BOOK FREE

A copy of my book, "HOG LOGY," revised and enlarged, will be sent Free to any hog raiser who mentions this paper when asking for it. A few of the many important subjects that are thoroughly covered in this valuable book are: Descriptions and illustrations of the leading breeds of swine; swine-record associations; best location for hog-raising; selecting a breed; what constitutes a good hog for the farmer; value of a good boar; value of a pedigree; breeding; care of the sow; rearing fall pigs; fecundity of sows; practical foods; the runt pig; when to market; inbreeding; anatomy of the hog (fully illustrated); diseases and treatment, etc., etc.



TRADE-MARK.

I Insure Hogs and Pay for All That Die

When my Remedy is used as a preventive. Write for plan. This Remedy is a MEDICINE especially for hogs, and must not be confounded with cheap "stock foods." 27 years unequalled success and the biggest money maker for hog raisers known.

PRICES:—25-lb. can, \$12.50; 12½-lb. can, \$6.50, prepaid; pkgs., \$2.50, \$1.25 and 50c. each. None genuine without my signature on package or can label.

JOS. HAAS, V. S., Indianapolis, Ind.



BERKSHIRES.

Mr. H. F. Stratton of Erin, Houston Co., Tenn., writes me on Aug. 15th 1903:

"The little pig just received is a beauty, I am delighted with him—wouldn't take twice twenty dollars for him. He is thoroughly patrician. I expect great things from him at the head of my herd of Royal Berkshires."

So send to Thos. S. White for patrician pigs rather than buy plebeians for a little less, do not be "penny wise and pound foolish," and especially in thoroughbreds. I have had 13 sows to farrow in past few days with over 20 more nearly due, order promptly for fall shipments, I never have enough to go round.

Short Horn (Durham Cattle) for sale. Write for particulars.

THOS. S. WHITE, Fassifern Stock Farm, Lexington, Va.

Hill Top Stock Farm.

BERKSHIRE HOGS and SOUTHDOWN SHEEP

—A Specialty.—

S. Brown Allen, who succeeds H. A. S. Hamilton & Co. in the ownership and management of this celebrated Stock Farm, with increased facilities, will make a specialty of breeding Berkshire Hogs and Southdown Sheep, without regard to cost, from the purest and most royal strains of imported blood.

My BERKSHIRE PIGS

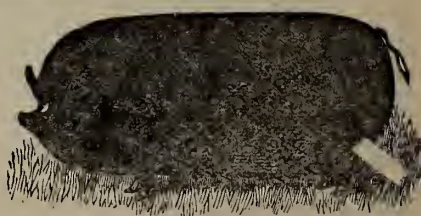
For this Fall delivery will weigh 100 pounds at 12 weeks of age, and for INDIVIDUAL MERIT cannot be excelled in the United States. They will make show hogs against any and all competitors and are being engaged every day.

S. BROWN ALLEN, Staunton, Virginia, (Successor to H. A. S. HAMILTON & Co.)

We positively guarantee to breed and ship the VERY BEST strains of thoroughbred registered **LARGE ENGLISH BERKSHIRE** Hogs for LESS MONEY than any other firm in the U. S., the superiority of our stock considered. Send us your order and we will satisfy you both in price and stock.

WALTER B. FLEMING,

Proprietor of the Bridle Creek Stock Farm, Warrenton, N. C.



LIFT THE QUARANTINE.

INTERESTING ANNOUNCEMENT TO FARMERS AND CATTLE SHIPPERS.

The appended notice will be interesting to farmers:

Office of State Veterinarian,
Blacksburg, Va.

Notice to Stockmen, Railroad Companies, and Others doing Business in the State:

The cattle quarantine through the State of Virginia will be raised November 1, 1903, to remain so until January 31, 1904. Thus during the months of November and December, 1903, and January, 1904, cattle may be transported to and from any portion of the State without quarantine restrictions.

And it is ordered That all stock pens which may have been reserved for the use of cattle from the quarantine district, prior to November 1st, next, shall not be used for receiving or storing cattle from the quarantined district which have been inspected and passed, nor for cattle originating outside of the quarantined district, except when such cattle are intended for immediate slaughter.

By order of the Board of Control.
J. G. FERNEYHOUGH,
State Veterinarian.

THE STATE POULTRY SHOW.

The annual show of the Virginia Poultry, Pigeon and Pet Stock Association is becoming an event of importance to the breeders of fancy poultry and other stock, not only throughout Virginia, but a number of adjoining states. The importance of the poultry industry is coming to front more forcibly from year to year and the poultry show is the educator that is largely responsible for its growth. A handsome premium list has been issued which gives all information, and those interested should send for it at once as the entries close November 12th. Address the Secretary, Frank Jenkins, 517 W. Broad street, Richmond. The show will be held Thanksgiving week, November 23-28, when reduced rates will be in effect on all railroads. The Masonic Temple is unsurpassed as a show room, all stock will be fed and cared for and the best judges will place the awards.

SHE GOT THE CANDY.

It was a Chicago child, not yet three years old, who, having been punished by her mother, called up her father on the telephone for sympathy. "Papa," was the call that his stenographer heard on answering the ring.

"Why, it's the baby," she said to her employer. The startled man, with visions of disaster in his mind, caught the receiver and said,—

"What is it, baby?"

"Mamma 'panked me," came the reply.

"What do you want me to do about it?" asked the relieved and amused parent.

"Come right home and bring me a pound of candy," said the child.—*November Lippincott's.*

ARMOUR'S BLOOD MEAL Cures Scours In Calves.

First proved by the Kansas Agricultural Experiment Station, and since corroborated by thousands of leading stockmen who have used it without a single failure. Equally effective for the diarrhea of all animals.

PREVENTS weak bones, paralysis of the hind legs and "thumps" in pigs; "big head" of foals; "rickets" of all young animals; abortion due to incomplete nutrition, and a host of other troubles.

A Potent Food for Work Horses, Dairy Cows, Poultry.

Write us for booklet giving valuable information about Blood Meal and our other feeding products. Consult us free of charge regarding stock diseases.

THE ARMOUR FERTILIZER WORKS,

Chicago. Omaha. Baltimore. Atlanta. Jacksonville.

SUNNY HOME HERD OF**ABERDEEN-ANGUS CATTLE.**

Baron Roseboy, 57666, by the great Gay Blackbird, dam by Eulalie Eric, 2d prize yearling at Columbian Exposition, 1893, heads the herd. Pedigree means only the tracing of good or bad qualities through several generations. The animals comprising this herd are direct descendants of the greatest prize winners of the breed for the past twenty-five years. Does this mean anything to you, who need of an animal of this the **GREATEST BEEF BREED**? If so, come and see the best lot of calves we ever bred, or write.

A. L. FRENCH, Proprietor, R. F. D. 2., Byrdville, Va.

(Note change of P. O. address),

Depot and shipping point, Fitzgerald, N. C., on D. & W. R'y, 24 miles southwest of Danville, Va.

CISMONT DORSETS

CISMONT STOCK FARM offers well developed young Dorsets of the best blood of England and America.

Prices Reasonable.

G. S. LINDENKOHL, Keswick, Albemarle Co., Va.

JERSEY CATTLE.

We have for sale, **Young Cows, Heifers and Young Bulls**, from cows testing **18 to 24 lbs. of butter in seven days**, and giving **40 to 60 lbs. of milk per day**. Also—

LARGE YORKSHIRE PIGS,

The coming bacon breed. Our stock is from the most noted breeders in England and Canada.

Write for prices. Address—

BOWMONT FARMS, SALEM, VIRGINIA.

FRUIT GROWERS, read the best fruit paper. SEND 10 CENTS and the names and addresses of 10 fruit growers to SOUTHERN FRUIT GROWER, Chattanooga, Tenn., for 6 months' trial subscription. Sample Free if you mention this paper. Regular price, 50c. a year. Best authority on fruit growing.


EMILY'S CHARGE.

A Serial Tale by Mary Washington.
CHAPTER V.

Soon after the episode recorded in the last chapter, the orphans set out for their new home. Mr. and Mrs. Wheeler gave them a hearty welcome, and they soon arranged their furniture and effects so as to make their cottage home quite comfortable, and even attractive, and they felt as well pleased with it as if it had been a brown-stone residence on Fifth avenue. The furniture was not of a showy kind, but consisted of carefully kept old family pieces each with a history attached to it. They had a few fine engravings and portraits, and a good stock of books which lent an air of refinement to their home.

Emily now felt the value of the systematic habits and practical instruction she had derived from her mother. The latter had taught her (amongst other useful things) how to make excellent bread, which branch of knowledge now proved most serviceable, enabling her to furnish their table with bread at once palatable and wholesome. They were fortunate enough also to find a cow awaiting them, a descendant of one that their Aunt Melissa had kept there, long before, and the milk and butter proved valuable adjuncts to their diet. Emily assumed the brunt of the household work, herself, but Alice assisted her as much as she was able, and between them, they kept the cottage in beautiful order. Walter's share of the work was to bring the water, cut up and bring in the wood and make up the fires. The gardening season had opened by the time they reached the cottage, and Mr. Wheeler was busy at work planting vegetables not only for home folks, but to market at the Springs. Emily turned her attention at once to flower culture, not only because she loved flowers, but because she had understood from Mr. Wheeler that there was a good sale for them, at the Springs, during the summer, made up in bouquet and boutonieres. Mr. Wheeler brought her rich black earth from the woods, and Emily fell diligently to work on her flower garden, assisted by Walter and Alice. She had brought with her a stock of sweet, old fashioned flowers from her old neighborhood, and to these she added a few tea roses, a stock of geraneums and verbenas, and of showy, brilliant annuals, such as Drummond phlox, asters, nasturtiums, scarlet, sage and others which flourished well on her rich flower bed, under her careful tendance.

As "May glided onward into June," the season began to open, though it was not at its height till August, Emily and the children were enlivened by seeing the stage go daily between the Springs and the railway station. The garden and the orchard at the cottage thrived very well, and every day or two, Mr. Wheeler wended his way to the Springs with fruit or vegetables. Towards the end of the summer, he



FARQUHAR Portable Saw Mills

with Engines and Boilers Complete.
Made in seven sizes, friction feed, cable lightning gas, patent chain set works and improved dogs. **AJAX CENTER CRANK ENGINES** are constructed with especial reference to the peculiar work required of them. This combination of engine and mill makes the best sawmill outfit on earth.

A. B. Farquhar Co., Ltd
York, Pa.

Illustrated catalog of farm machinery and implements, free.

AJAX Center Crank ENGINE

Reg. HOLSTEIN-FRIESIAN

CATTLE of the Netherland, De Kol, Clothilde, Pietertje and Artis families. Heavy milkers and rich in butter fat. Stock of all ages for sale.

Reg. **BERKSHIRES** From noted strains, Imported Headlight, Lord Highclere and Sunrise.

DORSET SHEEP

B. PLYMOUTH ROCK CHICKENS,

N. & W. and Southern R. R.

T. O. SANDY, Burkeville, Va.

WE OFFER a few well-bred registered Jersey Bull and heifer Calves at \$30 each.

They are four months old and from best strains of this breed; also a few young Berkshire boars large enough for service at \$15 each, and pigs eight weeks old at \$6 each—by pair or trio, not akin.

M. B. ROWE & CO., - Fredericksburg, Va

POLAND-CHINAS.

I have a limited number of pigs by my fine boars Gray's Big Chief, 57077; and Victor G, 57075, and can furnish pairs not akin or related to those previously purchased. Young boars and sows of all ages. Send to headquarters and get the best from the oldest and largest herd of Poland-Chinas in this State at one-half Western prices. Address



GRAY'S BIG CHIEF, 57077.

J. B. GRAY, Fredericksburg, Va.

THE OAKS

Has for sale, the grand Shorthorn bull, "Rock Hill Abbottsburn" 155113, a grandson of Mary Abbottsburn 7th; also a nice lot of CALVES, BULLS and HEIFERS; 2 Reg. MORGAN COLTS at a bargain.

B. B. BUCHANAN, Bedford City, Va.

carried some dandy little bouquets of scarlet sage or geranium, tastefully blended with other flowers. The peaches, pears and grapes coming into market by about this time also sold very readily, so while Mr. Wheeler's modest marketing did not bring in any marvellous influx of money either to himself or the orphans, still it was enough to supply them simple and moderate wants for several months, and moreover he raised enough vegetables to supply the table of both families, besides.

Whilst busy with her flowers and household cares, Emily did not forget the important duty of instructing Walter and Alice. She was well fitted to teach, not only from having had good advantages of education herself, but because she had a gift for conveying information to children, and stimulating their minds. In addition to the formal routine of school, she took great pains in forming and directing the literary taste of her brother and sister, the more so as she looked chiefly to literature to supply any deficiency that might exist in their school training. She used often to quote a remark of her mother's, that whoever loved nature and literature could never be utterly lonely, as they would always have two delightful and cheering companions. They fortunately had a very choice collection of books, saved from the wrecks of their fortune, and as Emily unpacked these, she recalled a cheering passage from Channing's noble essay on "Self Culture," to the effect that no one need consider his roof a poor one when it holds beneath its shelter such kingly guests as Milton, Shakespeare and other great writers.

In the autumn her promised school was given her, and the Trustees, with kindly consideration, located it near the cottage. Emily, of course, had occasional difficulties to contend with in the shape of stupid, unruly or obstinate pupils, but take it all in all, her school was very satisfactory, and she worked in it gladly, both because she loved the work itself, and because it enabled her to support those whom she loved; so though she "led laborious days," they were cheerful ones. She carried on her work with zest and vitality, and infused some of the same spirit into her pupils. She had no arbitrary rules for them; only a few simple and reasonable ones, on a compliance with which she insisted.

She gave her pupils a great deal of oral instruction, thereby making things much more clear and comprehensible to them. In short, she figured out for herself a sort of kindergarten system. She tried the same plan she had found so advantageous to Walter and Alice. She read aloud daily to her scholars, making judicious selections, and reading with an animation and expressiveness that gave life and clearness to the reading.

Sometimes she could not help feeling a little anxious about Walter's and

REGISTERED HEREFORD CATTLE.



Service Bulls; Imported Salisbury 76059 (19083), a grandson of the famous Grove 3d 2490, and a descendant of the world renowned Lord Wilton 4057 from the 4th generation.

Snowball, the dam of Salisbury, is now in the herd of His Majesty King Edward VII.

Lars, Jr., is by Lars of Western fame and his dam is Judy out of a Sir Richard 2nd cow. This makes a great combination of the Grove 3d, Lord Wilton, Anxiety, Peerless Wilton and Sir Richard 2nd strains. No better breeding in the world today, FOR SALE—Yearling bulls by above sires WANTED—Reg Hereford heifers, 18 to 24 months old, **not bred**; will exchange bulls for heifers of equal quality.

Extremely low prices to close out this bunch; only a few left.

Write your needs or call and make your own selection.

MURRAY BOOCOCK, Owner, Keswick, Alb. Co., Va. Keswick is on the C. & O. Ry., near Charlottesville, Virginia.

Bacon Hall Farm.

Hereford REGISTERED Cattle

"TOP" BREEDING, CALVES NOT AKIN.

MOTTO Satisfaction or no sale.

E. M. GILLET & SON, - Glencoe, Maryland.

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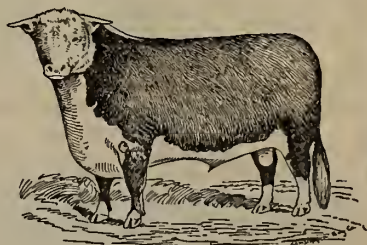
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Choice stock at farmer's prices.

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Alice's education when they should be a few years older. She did not feel so much disturbed about Alice as about Walter, however. She had seen so many girls acquire something of learning, at boarding schools, and superficial accomplishments which they dropped in a few years, that she felt no desire for Alice to do likewise. Alice showed no turn either for music or drawing, which lessened Emily's regret at her mobility to have her instructed in these branches. She might have taught her music, herself, but for lack of an instrument, but as it was, she resolved to teach her thoroughly and carefully in all the other branches in which she herself was versed, not neglecting needle work and bread making, two branches which like the famous "low voice" of Cordelia, are "excellent things in a woman." She aimed also to make Alice a thorough student of the English language, for amid the multifarious branches taught nowadays, the structure of one's own language is not studied as closely as it should be, nor are its vast and noble resources sufficiently mastered.

About Walter, she could not make her mind quite so easy. She could not shut her eyes to the fact that in a few years, he would need another teacher than herself. In some branches but she tried to take short views of life, and to dismiss this anxiety, trusting that an opening would be made for him, when his need arose.

The orphans found winter in the mountains more severe than they had been accustomed to, but good Mr. Wheeler was careful to supply them well with fire wood, so they suffered but little from the rigor of the weather.

When Christmas came, their festivities consisted chiefly in decorating the cottage profusely with evergreens, interspersed with red berries, and the waxy white berries of the mistletoe which Walter scaled the top of a gigantic oak to obtain.

For a year or two after this, these annals scarcely afford anything sufficiently eventful to retail to our readers. Their life went on in much the same routine as we have already described. Year by year, the little cottage grew more comfortable and homelike, and the flower garden, larger and more flourishing. By dint of economy and ingenuity, they gradually introduced more and more conveniences and refinements into their little home. Every thing in it had a history, a memory, a sentiment attached to it, for it was partly filled with old family furniture and pictures, and partly with things that had been gifts, or had been provided by their own efforts or ingenuity. The book shelves, for instance, were Walter's work, he having a considerable mechanical turn, and his wits having been sharpened moreover, by their having no place to keep the books. On the mantel piece was a pair of little vases he had given Emily one Christmas, bought with a little fund

NOW IS THE TIME to buy HOLSTEINS from the Ury Farm Herd.

Ury Alwina Count Paul De Kol; De Kol 2nd Butter Boy 3rd No. 2, and Lord Harford De Kol head our herd. You know their official backing. There is nothing better. 15 bull calves at bargain prices. Their dams are of the De Kol, Aaggie, Netherland, Pieterje and Clothide strains and are of the producing kind. The best bulls are sold young; also a few cows and heifers. Choice ENGLISH BERKSHIRE pigs of the best strains. Before buying, correspond with or visit

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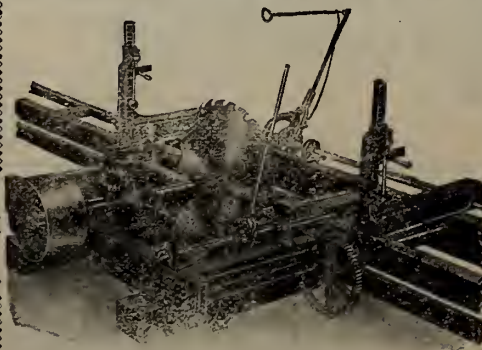
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he had obtained by selling chestnuts, and his sister prized them more than if they had been of the finest Sevres China. Some pleasant association was linked with every article in their simple household, and thus their little possessions gave them more satisfaction than is felt by a wealthy person who has only to own his furniture and adornments from trades people.

(To be continued.)

GOOD HOUSEKEEPING.

WAFFLES.

Take two pints of flour and one of meal and sift them together, add a heaping teaspoon of salt and three well beaten eggs and enough buttermilk to make a thin batter (an old cook's rule was to have them as thick as strained honey) dissolve a teaspoon of soda in a little warm water and add it to the mixture. Make the waffle irons very hot and cook the waffles quickly, serve at once.

SALLY LUNN.

Two quarts of flour, one quart of milk and a cup of yeast, and five eggs nearly a cup of butter and lard mixed, a tablespoon of sugar and a teaspoon of salt. Beat all these well together and set it in a warm place to rise. After dinner beat it down well and put it into a greased cake pan and let it rise again. Cook as you do lightbread and serve very hot.

ENGLISH HOE CAKES.

Two quarts of flour and three eggs, half cup of butter or butter and lard mixed, a cup of yeast. Mix up with new milk into a dough as stiff as biscuit dough and let it rise all night. In the morning roll out the dough about three quarters of an inch thick and cut into squares with a sharp knife. Let them rise and just before you need them fry on a very hot griddle, or bake in a very hot oven for fifteen minutes. These are not good after they begin to get cool, so they should be served as quickly as possible.

SMOTHERED CHICKEN.

Always try to have the chickens killed the day before you use them. It is best to have a large frying sized chicken for smothering. Split them down the back and fold the wings and legs under. Lay them in a pan of slightly salt water awhile before cooking. When ready to cook put them in a pan, rub them well with butter, sprinkle salt and pepper over them and put two or three slices of bacon in the pan. Put about a quart of water to two chickens and set them inside the stove. Let them cook slowly, and baste frequently. When done take out and make a gravy with the water in

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This cut is not the machine but simply shows the manner of fastening the steel rope to the stump. We cannot tell you all about it here. Our catalogue shows Full Line of Stump Pullers testimonials, prices, etc. It will surprise and interest you.



PULLS Yellow Pine Stumps or Trees.

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is built for that purpose and does it rapidly and cheaply. A machine that will pull yellow pine stumps will pull almost anything else. It is being used by many planters and most of the leading R. R. and levee contractors. It has 3 times the power of our machines for ordinary work and pulls 3 acres at a setting. Milne Mfg. Co., 834 Eighth St., Monmouth, Ill.

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For further information, address, MENTION THIS JOURNAL.

CHAS. N. FRIEND, General Agent, CHESTER, VIRGINIA.

the pan by adding a well beaten egg and two or three spoons of browned flour creamed with a large tablespoon of butter. Pour it around the chicken and garnish the dish with parsley. Serve hot.

CHEAP FRUIT CAKE.

This is not only a cheap fruit cake, but one of the best I know of and will prove perfectly satisfactory except where the real black cake is desired.

Three heaping cups of flour. Two cups of sugar. Two cups of butter. Six eggs beaten separately and very light. Half pound of raisins. Half pound of currants. Quarter of a pound of citron. One teaspoon of cinnamon, one of nutmeg and one of cloves. One glass of brandy. Cream the butter and sugar together, then add the yolks of the eggs, and then stir in the fruit which is floured, and lastly sift in the flour, bake slowly in a loaf or in small pans.

THANKSGIVING APPLE PIE.

Pare the apples and stew them with very little water until they can be put through a colander. Sweeten them and season with cloves and all-spice. Make a rich pastry dough and line your pie plate with it, put the apples in and sprinkle a layer of seeded raisins over them, then put on a top crust and bake. Sprinkle the tops with powdered sugar and serve either hot or cold.

SWEET POTATO PIE.

One quart of potatoes mashed and put through a colander, one cup of butter, six eggs, beaten separately, four cups of sugar, two cups of rich milk, one small glass of brandy or whiskey, vanilla, nutmeg and cinnamon. Save the whites till the last then stir them in. Bake in a rich paste and serve cold.

THE BEST SPONGE CAKE.

One pound of sugar. Ten eggs. Three quarters of a pound of flour, the juice and rind of one lemon. Beat the whites and yolks separately and then mix the yolks and the sugar slowly beating hard all the time, to these add the flour and the whites alternately just folding them in without beating. Lastly add the lemon and bake very quickly in a loaf.

GINGER CAKE.

Two pounds of flour, one of butter and lard mixed. (I sometimes use altogether lard.) One pound of sugar, light brown is best, one pint of molasses, three ounces of ground ginger, one teaspoon of cinnamon, and one teaspoon of soda. Roll and cut into shapes.

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Levering Coffee.....	10	Fresh Mixed Cakes, per lb.....	8	Country Butter, per lb.....	22
Granulated Sugar, per lb.....	4½	6 bars Colgate's Octagon Soap....	25	Irish Potatoes, bushel.....	85
Light Brown Sugar, per lb.....	4½	7 bars Octagon Shape Soap, 10 oz.	25	Best Water Ground Meal, per pk..	20
Daisy Coffee, per lb.....	10	10 bars Moon Soap, 8 oz.....	25	Best Water Ground Meal, bush...	70
Arbuckle's Coffee, per lb.....	11	12 bars Hustler Soap, 8 oz. cakes.	25	Best Ship Stuff, per 100, \$1.20; per	
Best Green Tea, per lb.....	75	Lenox Soap, 7 bars.....	25	ton	23 00
Choice Green Tea, per lb.....	60	Small California Hams, per lb....	9	Best Bran or Brown Stuff, per 100.1	10
Best Black Tea, per lb.....	50	Good Salmon, per can, 9c.; 3 cans.	25	Best Mixed Oats, per bush.....	48
Good Green Tea, per lb.....	40 & 50	Large Mackerel, each	10	Best No. 1 Timothy Hay, per ton.17	00
Good Black Tea, per lb.....	40	Large Can Good Tomatoes.....	8	Porto Rico Molasses, per gal.....	35
Mixed Tea, per lb.....	30, 40 & 50	Large Can Best Tomatoes.....	9	New Orleans Molasses, per gal....	50
Fair Black Tea, per lb.....	25	2-lb. can Best Tomatoes, can.....	6	Good Dark Molasses, per gal.....	20
Best Rice, per lb.....	8	Large Juicy Lemons, dozen.....	15	Maple Syrup, ½ pint.....	10
Good Rice, per lb.....	5	Green Coffee, per lb., 9c.; 3 lbs...	25	3 plugs of any kind of 10c. tobacco	
Pure Leaf Lard, per lb.....	10	Qt. Mason Jars of Light Syrup...	10	for 23c.: such as Peach, Plum,	
Good Lard, per lb., 9c.; 3 lbs.....	25	½ gal. can Light Syrup.....	20	Sun Cured. Grape, Reynold's,	
Cooked Sliced Ham, per lb.....	12½	1 gal. can Light Syrup.....	40	and other brands.	
Good Salt Pork, per lb.....	7	½ bbl. Clipped Herrings.....	2 75		
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Best Potted Ham and Tongue,		Best Full Cream Cheese, per lb...	16	Moore's Crown, fine, per gal.....	\$3 00
per can	4	Swiss Cheese, per lb.....	20	Moore's Excelsior, fine, per gal..	2 00
Chipped Beef, one-half lb.....	10	Lump Starch, per lb.....	4	Moore's Keystone, 3 years old,	
New N. C. Cut Herrings, dozen		Evaporated Peaches, per lb.....	9	per gal.....	2 50
10c.; or bbl.....	4 25	Prunes, 7 lbs.....	25	Pure Virginia Apple Brandy, per	
New N. C. Roe Herrings, dozen,		Malta Vita, box.....	12	gal.	3 00
18c.; or bbl., \$5.; or ½ bbl.....	2 75	Can Corn, 4 cans.....	25	Maryland Apple Brandy, per gal.	2 25
Our Pride of Richmond Flour, per		New Currants, 1 lb. pkge., 12c.; 8		Best Gin, per gal.....	2 50
bbl.	4 75	oz. pkge.....	8	Good Gin, per gal.....	2 00
Our Daisy Flour, per bbl.....	4 25	Beans, bushel, \$2.75; per qt.....	9	Best N. C. Corn Whiskey, per gal.	2 00
Our Excelsior Flour, per bbl.....	4 00	Buckwheat, per lb., 5c.; 6 lbs....	25	Blackberry Wine, per gal.....	45
Fresh Soda Crackers, per lb.....	5	Seeded Raisins, 1-lb pkge.....	9	McDermott's Malt Whiskey, per	
Ginger Snaps, per lb.....	5	Mother's Oats, pkge.....	9	bottle	80
New Mixed Nuts, per lb.....	12½	Quaker Oats, pkge.....	10	Wilson Whiskey, per bottle.....	1 00
Cocoanuts, 5c.; or, per 100.....	3 50	Elgin Butter, per lb.....	25	Jas. E. Pepper Whiskey, bottle..	1 00
				O'Grady's Malt Whiskey, per bot.	80

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ON THE INSTALMENT PLAN.

Mrs. Browne.—"Oh, what lovely wedding presents! Such beautiful silverware and such rare china! Wasn't it nice to get such presents?"

Mrs. Greene.—"Yes, it was; but we are now beginning to pay for them on the instalment plan."

Mrs. Browne.—"Pay for them? On the instalment plan? Why, Mrs. Greene, what do you mean?"

Mrs. Greene.—"Why, the young people who gave us wedding presents are getting married, and we have to send them wedding presents."—*November Lippincott's.*

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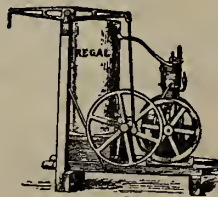
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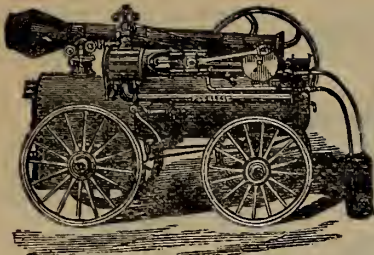
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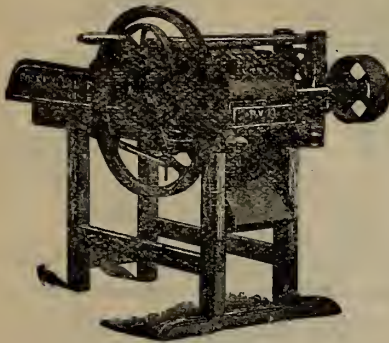
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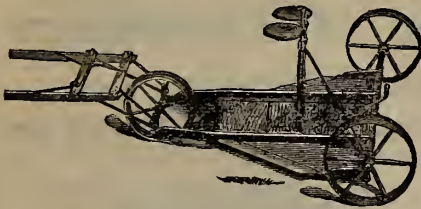
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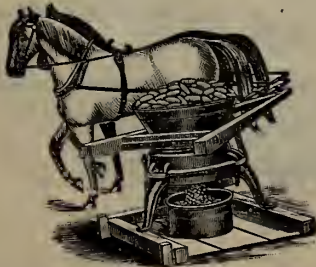
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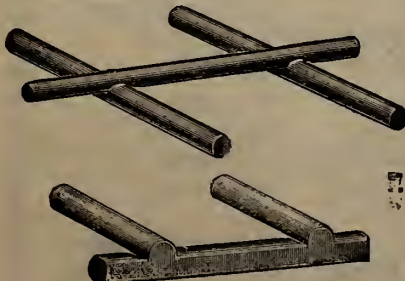
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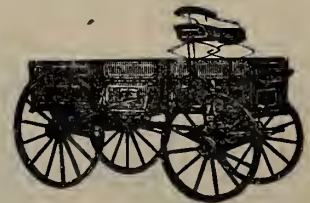
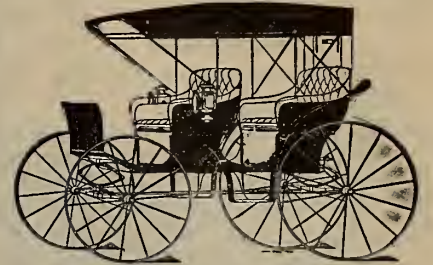
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News-Leader, Richmond, Va.....	3 00	3 00

TRI-WEEKLY.

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WEEKLIES.

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The Baltimore Sun	1 00	1 35
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Hoard's Dairyman	1 00	1 35
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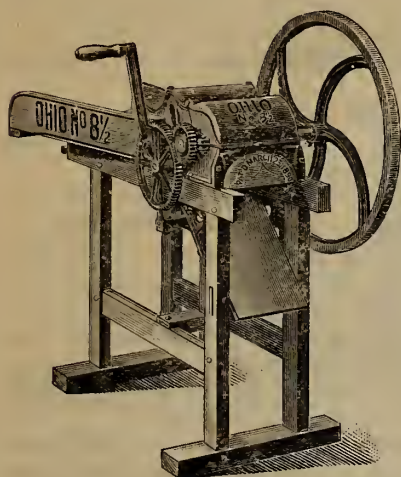
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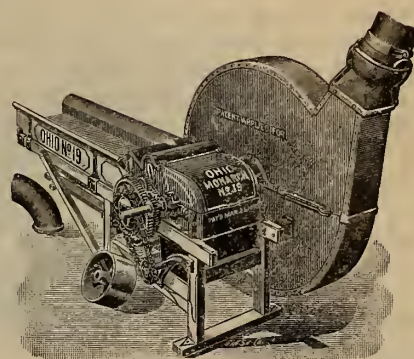
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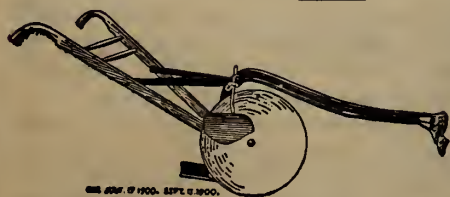


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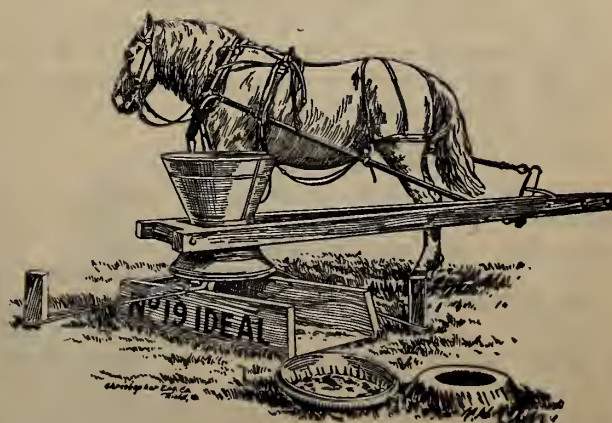
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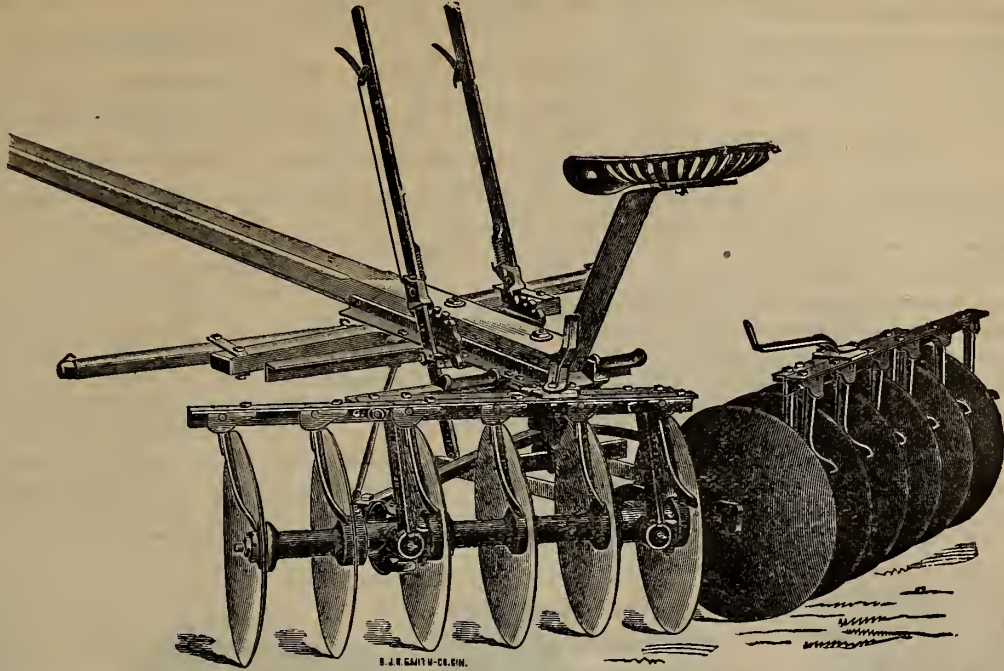
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Little Archie Richards, at the close of the Thanksgiving dinner, sat at the table with his face suffused with tears. His mother was greatly troubled. With a sweet smile and with gentle intonation she put one arm around her little baby boy and asked,—

"What is it mamma's little darling wants?"

But "mamma's little darling" continued to cry.

Mamma made another effort to find out the trouble.

"Does mamma's baby boy want some more cake?" she asked.

"No'm," said the child, while the tears continued to flow.

"Does he want some more pie?" she further inquired.

"No'm," he further replied.

"We'll," said the mother, making a last effort to reach his case, "tell mamma what baby wants."

The little boy managed somehow to say between sobs, "I wants some of this out I've got in."—

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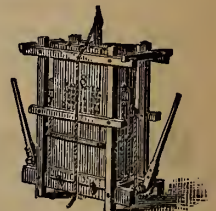
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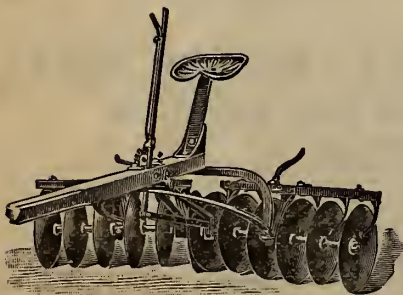
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The program is now being prepared, and if you have any suggestions to make please do so at once.

We are expecting many of our best workers and some of our best teachers to help on the program, some of them from the Eastern States.

L. A. GOODMAN, *Secretary*,
Kansas City.

THERE WERE ENOUGH INSIDE.

In England, the lord chancellor, by virtue of his office, has a right to inspect all public asylums and hospitals. One day, while the late Lord Herschell was paying a visit at the house of a friend near Norwich, he went for an afternoon stroll, and, happening to pass by the great insane asylum at that place, the thought struck him that this was a good time to perform an official duty. Incidentally, it may be said that Herschell bore the repu-

tation of being somewhat pompous at times. He knocked at the door, which, after a long delay, was opened by an attendant.

"You can't come in," he was informed. "It's not visiting hours."

"That makes no difference. I shall inspect this institution just the same."

"Indeed, but you'll not."

"Come, come, my good man, I'm the lord chancellor," Herschell expostulated.

"Oh, that's all right," answered the functionary, "we've four of you inside already."—*Success*.

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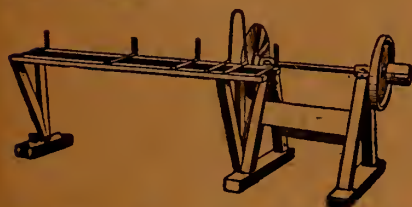
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